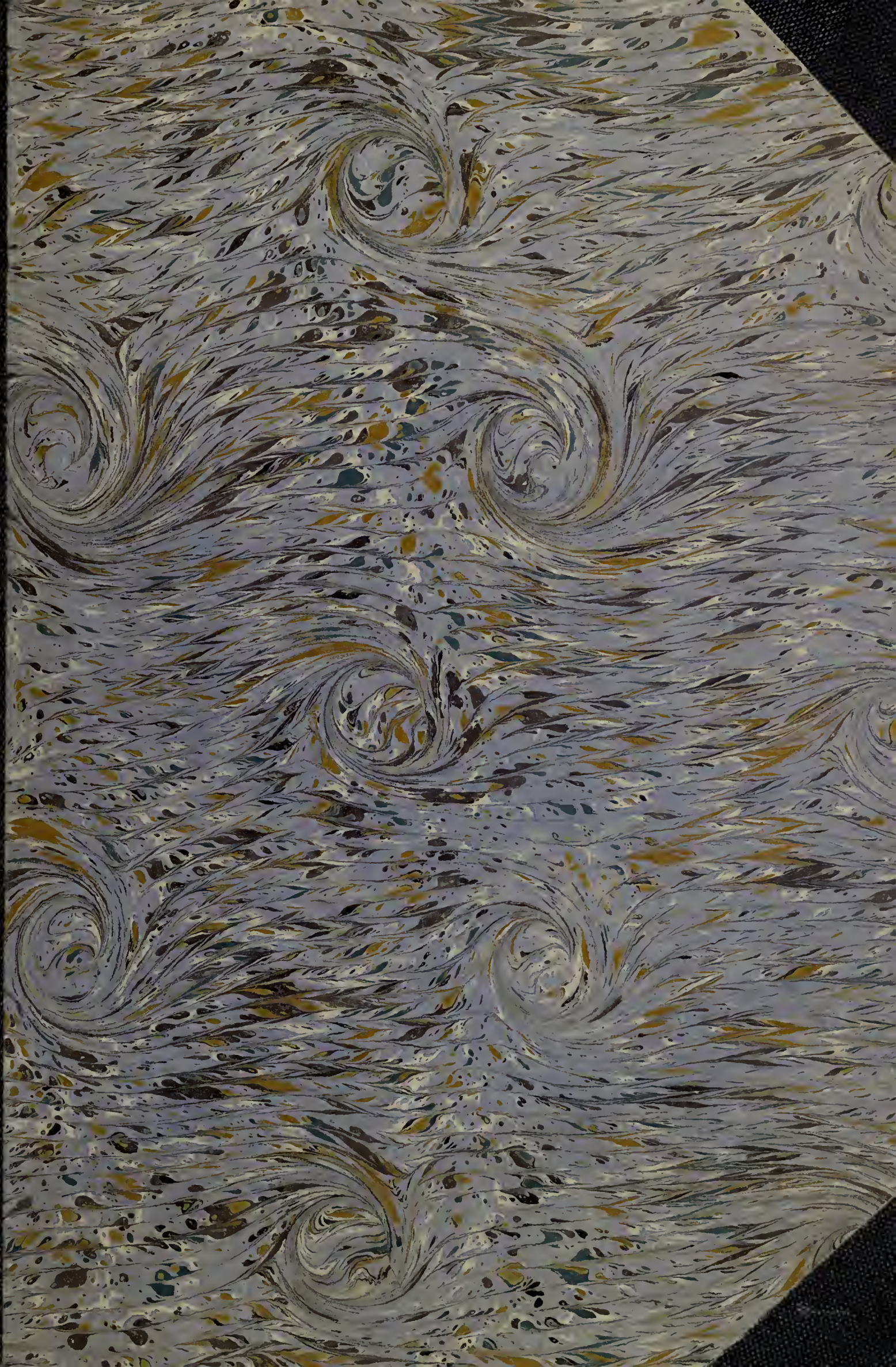




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B I O L O G I A
CENTRALI-AMERICANA.

I N S E C T A.

COLEOPTERA. VOL. IV. PART 7.

RHYNCHOPHORA.

CURCULIONIDÆ.

CURCULIONINÆ (concluded) AND CALANDRINÆ.

BY

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1909-1910.

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CONTENTS.

	Page		Page
INTRODUCTION	v	APPENDIX TO THE CURCULIONINÆ.	
ERRATA ET CORRIGENDA	vi	Hylobiina	178
Subfam. CURCULIONINÆ (<i>continued</i>).		Anchonina	181
Group Acamptina	1	Cleonina	181
„ Trypetina	4	Ceratopina	182
„ Cossonina	7	Erirrhina	183
Sect. Dryophthorides	8	Gymnetrina	185
„ Pentarthrides	9	Anthonomina	185
„ Pseudapotrepides	21	Tychiina	190
„ Cossonides	22	Otidocephalina	194
„ Rhyncolides	73	Cholina	194
Subfam. CALANDRINÆ.		Cryptorrhynchina	198
Group Rhynchophorina	79, 177	Zygopina	207
„ Sphenophorina	82	Tachygonina	210
„ Calandrina	167	Barina	210
„ Litosomina	170	Cossonina	211
„ Sivalina	171		
Sect. Orthognathides	171	INDEX	213
„ Sivalides	172	PLATES.	

INTRODUCTION.

THIS Volume contains the enumeration of the rest of the species of the subfamily Curculioninæ (under which the Cossonids are here placed) and the whole of the subfamily Calandrinæ. The Appendix to the Curculioninæ was required to include such species as had been overlooked or wrongly placed in the general sorting of the collections, or that had come to hand too late to be inserted in their proper places, one holarctic group, the Gymnetrina, being thus added to the Mexican fauna.

The preceding Volume of this series, Coleoptera, IV. part 6, is devoted to the families Brentidæ, Scolytidæ, and Anthribidæ, and the general sequence of the arrangement of the Rhynchophora has thus been interrupted: species included in the present Volume, "Coleoptera, IV. part 7," should of course follow those enumerated in "Coleoptera, IV. part 5."

The subfamily Calandrinæ is represented within our limits by a large number of species, some of them (*Cactophagus*, *Phyllerythrurus*, *Eucactophagus*, *Metamasius*, *Rhodobænus*, &c.) being very conspicuous brilliantly-coloured insects. *Sphenophorus*, sensu stricto, includes many destructive North-American species, but it is poorly represented south of Mexico. It is probable that some of the Eastern genera of this subfamily named by Chevrolat and others will prove to be inseparable from *Metamasius*; but no attempt has been here made to identify them. *Calandra granaria*, *C. oryzae*, &c. are carried about everywhere by commerce, and other species are often introduced in imported plants. The larger exotic forms attack palms, Cactaceæ, Amaryllidæ, Liliaceæ, Musaceæ, maize, &c.

Remarks on the three remaining groups of the subfamily Curculioninæ, the Acamptina, Trypetina, and Cossonina, will be found in their respective places in the following pages.

The material belonging to the U.S. National Museum, the Royal Museum at Dresden, and Signor A. Solari, of Genoa, has been examined, and we are again indebted to the last-named gentleman for various species not represented in our collection. The types of the Mexican and Central-American species described by Gyllenhal, Boheman, Fåhræus, and Chevrolat have been kindly communicated by Dr. Sjöstedt for examination, these being supplemented by a few others in the Sommer Collection lent by Mr. O. E. Janson. Prof. F. H. Chittenden, too, has sent us co-types of nearly all the North-American *Sphenophori* described by himself for comparison with the Mexican forms.

Altogether 344 species are enumerated in the present volume (193 of which belong to Curculioninæ—bringing the total for this subfamily to 2466—and 151 to Calandrinæ), with seventeen new genera.

The nine coloured or partly coloured Plates have been drawn and lithographed, as before, by Mr. E. Wilson, of Cambridge.

G. C. C.

October 1910.

ERRATA ET CORRIGENDA.

Page	Line	
58	8	For " <i>C. parvicollis</i> " read <i>C. parvicollis</i> .
80	16	for Brazil ^{2 3 4} read Brazil ^{2 4} .
80	17, 18	The remarks as to "the introduced example found at Boston" refer to <i>R. noxius</i> and not to <i>D. germari</i> as stated.
102	23	For <i>Matamasius</i> read <i>Metamasius</i> .

BIOLOGIA CENTRALI-AMERICANA.

ZOOLOGIA.

Class INSECTA.

Order COLEOPTERA.

Tribe RHYNCHOPHORA.

Fam. CURCULIONIDÆ.

Subfam. CURCULIONINÆ (continued) * †.

Group ACAMPTINA.

Cryptorhynchini, Group II. *Acampti*, Leconte.

To this group Leconte and Horn referred a single N.-American genus, *Acamptus*, at the same time calling attention to its relationship with the Byrsopides and Cossonides. The new genera now added from within our limits, particularly *Chærorhynchus*, show such a decided affinity with various members of the last-mentioned group that they seem to me to be best placed near the Cossonina and Trypetina. The "Acamptina" have the rostrum stout and deflexed, its basal portion received in a deep groove in the prosternum and its apex resting on the narrowly separated anterior coxæ; the prothorax projecting over the head anteriorly; the third tarsal joint simple; the funiculus 5-, 6-, or 7-jointed; and the body more or less setose and lutose. The four genera may be separated thus ‡:—

Funiculus 5-jointed; antennal club with the basal joint shining and very sparsely pilose; tarsi rather stout	ACAMPTOPSIS.
Funiculus 6-jointed; antennal club with the basal joint shining and very sparsely pilose; tarsi rather stout	PSEUDACAMPTUS.

* By G. C. CHAMPION.

† In a preceding volume of this subject a recorded Central-American Hylobiid was omitted, viz. *Ischiomastus marginatus* Faust (Stett. ent. Zeit. 1893, p. 10), from Costa Rica and Colombia. This insect, the ♀ type of which I have seen, is certainly congeneric with *Lixomorpha albomarginata*, Champ. (B. C.-A., Coleopt. iv. 4, pp. 63, 719), also from Costa Rica, and, like it, differs from typical *Ischiomastus* (*plinthoides*, Kirsch, *torulosus*, Faust, &c.) in having the mentum and anterior coxæ unarmed in the ♂. *Lixomorpha* (1902) must be sunk as a synonym of *Ischiomastus*, Kirsch (1889).

‡ *Paracamptus*, Casey, and *Acamptoides*, Ch., have a complete rostral canal, a bilobed, pubescent third tarsal joint, &c., and they do not belong to this group.

Funiculus 7-jointed.

Antennal club with the basal joint shining and very sparsely pilose; tarsi

rather stout [ACAMPTUS.]

Antennal club closely pubescent, larger; tarsi slender CHERORRHYNCHUS.

ACAMPTOPSIS, gen. nov.

Head deeply inserted into the prothorax; eyes inferiorly placed, large, hidden in repose; rostrum deflexed, short, very stout, feebly curved, the tip resting on the anterior coxæ, the scrobes deep and oblique, the antennæ inserted at the middle, the funiculus 5-jointed, the club small, ovate, with the basal joint shining and the others very short and densely pubescent; prothorax subtubulate and cucullate in front, feebly bisinuate at the base, and emarginate at the apex beneath; scutellum prominent, small; elytra much wider than the prothorax, oblong-subtriangular, feebly sinuate at the base, abruptly produced at the apex; prosternum broadly and deeply sulcate from the apex to the narrowly separated anterior coxæ; ventral segments 3 and 4 short, together a little shorter than 5; legs short and stout; tibiæ strongly unguiculate at the outer apical angle; tarsi with the third joint simple, the claws divergent; body oblong, densely luteous, and also set with short clubbed setæ.

Type, *A. encaustus*.

The 5-jointed funiculus, the somewhat curved rostrum, and the relatively shorter third and fourth ventral segments distinguish this genus from the following, *Pseudacamptus*. The type is from Panama, and a second species is found in Cuba*. The sculpture in both of them is in great part hidden by the dense earthy incrustation.

1. *Acamptopsis encaustus*, sp. n. (Tab. I. figg. 1, 1 a-c.)

Oblong, somewhat flattened above, nigro-piceous, the antennæ and tarsi ferruginous; densely coated with a brown earthy incrustation, and also sparsely set with short, rather stout, clubbed, suberect setæ (which extend to the rostrum, antennal scape, and legs), those on the elytra uniseriately arranged along each interstice, the last joint of the funiculus also with several very long projecting setæ. Head, rostrum, and prothorax densely, finely punctate, the prothorax with a well-marked subapical constriction. Elytra seriate-punctate, the interstices somewhat raised and densely punctulate.

Length $2\frac{3}{5}$, breadth $1\frac{1}{10}$ millim. (♀ ?)

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

One specimen. Smaller and less robust than *Pseudacamptus plurisetosus*, the setæ not so stout, &c.

* *Acamptopsis cubanus*, sp. n.—Oblong, nigro-piceous, the tips of the tarsi ferruginous; covered with a brown earthy incrustation, and also sparsely set with short clubbed setæ, those on the elytra uniseriately arranged along each interstice. Rostrum very stout, rugose, about as long as the posterior portion of the prothorax as seen in profile. Prothorax as long as broad, abruptly constricted towards the apex, the posterior portion rounded at the sides, the tubulate apical portion also rounded in front as seen from above; densely punctate. Elytra moderately long, gradually narrowed from the base; seriate-punctate, the interstices somewhat raised. Beneath alutaceous, rather sparsely punctate; first ventral segment somewhat concave. Tibiæ broad, each with a long apical uncus, which is widened towards the base.

Length 3, breadth $1\frac{1}{2}$ millim. (♂.)

Hab. CUBA, Cayamas (*Schwarz, in U.S. Nat. Mus.*).

One specimen. A little more oblong than *A. encaustus*, the rostrum longer, the prothorax rounded at the sides and strongly constricted towards the apex, the elytra less widened at the base.

PSEUDACAMPTUS, gen. nov.

Head deeply inserted into the prothorax, large; the eyes inferiorly placed, hidden in repose; rostrum deflexed, the tip resting on the anterior coxæ, very stout, short, parallel-sided, nearly straight, with deep, oblique scrobes, the antennæ inserted at about the middle, the funiculus 6-jointed, the club abrupt, small, ovate, with a shining, subglabrous basal joint and the other joints very short and densely pubescent; prothorax subtubulate and cucullate in front, feebly sinuate at the base, and deeply emarginate at the apex beneath; scutellum small, oblong-subquadrate, flat; elytra much wider than the prothorax, subtriangular, sinuate at the base, their apices strongly declivous and abruptly produced; ventral segments 3 and 4 short, together about as long as 5; prosternum broadly and deeply excavate from the apex to the narrowly separated anterior coxæ; legs stout; tibiæ sinuous within, strongly unguiculate at the outer apical angle and mucronate at the inner angle; tarsi sparsely pilose beneath, the third joint simple, the claws divergent and widely separated; body oblong, densely luteous and also thickly set with stout clubbed setæ.

Typo, *P. plurisetosus*.

The Mexican insect from which the above characters are taken is nearly related to the N.-American genus *Acamptus*, Lec., but the funiculus is 6-jointed*, the elytra are more sinuate along the basal margin and have more prominent humeri, and the clubbed setæ extend along each interstice. The sculpture is almost entirely hidden by the vestiture.

1. *Pseudacamptus plurisetosus*, sp. n. (Tab. I. figg. 2, 2 a-c)

Oblong, somewhat flattened above, opaque, alutaceous, nigro-piceous, the antennæ ferruginous; densely incrustate with brown scales and also thickly set with short, stout, erect, clubbed setæ (which extend to the legs, rostrum, and antennal scape), those on the elytra uniseriately arranged down each interstice, the last joint of the funiculus also with several long projecting setæ. Head and rostrum densely, finely punctate. Prothorax about as long as broad, slightly rounded at the sides from the well-marked subapical constriction to the base, the tubulate portion nearly half the length of the posterior portion; closely punctate. Elytra moderately long, seriate-punctate, the interstices feebly convex, 3 and 5, and 1 (sutural) towards the apex, distinctly raised. Beneath sparsely punctate.

Length $3\frac{2}{3}$, breadth $1\frac{1}{2}$ millim.

Hab. MEXICO, "Sierra de Durango" (*ex coll. Flohr*).

One specimen, probably from the State of Vera Cruz. The setæ in this species are much stouter than in *Acamptus rigidus* (for an example of which we are indebted to Mr. Wickham), and those on the elytra are not confined to the alternate interstices, as in *A. rigidus* and *A. echinus*.

CHÆRORRHYNCHUS, gen. nov.

Head deeply inserted into the prothorax, large; eyes inferiorly placed, almost hidden in repose; rostrum deflexed, the tip resting on the anterior coxæ, very short, stout, and parallel-sided, feebly curved, somewhat depressed at the base, the scrobes deep and obliquely descending, the antennæ inserted slightly beyond the middle, the funiculus 7-jointed, joints 3-7 strongly transverse, widening outwards, the club rather large, ovate, and closely pubescent, its basal joint shorter than the others united; prothorax subtubulate and cucullate in front, feebly sinuate at the base, and deeply emarginate at the apex beneath;

* *Acamptus rigidus*, Lec., has the funiculus 7- (not 6-, as stated by its describer) jointed, a fact already pointed out by Casey (Ann. N. York Acad. Sci. vi. p. 446).

scutellum small, subtriangular, flat; elytra elongate-subtriangular, subtruncate at the base, much wider than the prothorax, their apices strongly declivous and produced; prosternum broadly and very deeply sulcate from the apex to the narrowly separated anterior coxæ; ventral segments 3 and 4 extremely short, together very little more than half the length of 5; legs short, the femora and tibiæ stout, the tibiæ almost straight, strongly unguiculate at the outer apical angle, and toothed at the inner angle; tarsi with a few hairs beneath, slender, the third joint slightly excavate above for the reception of the base of the fourth, scarcely wider than the second, the claws divergent; body elongate, opaque, setose, the depressions of the surface luteose.

Type, *C. tenuitarsis*.

This genus is easily separable from its allies by the very slender, short tarsi; the 7-jointed funiculus; the large, ovate, closely pubescent antennal club, with a comparatively short basal joint; the basally depressed rostrum; the very deep, almost glabrous prosternal sulcus; the extremely short third and fourth ventral segments; and the opaque, alutaceous, finely setose surface of the body. The type bears a certain resemblance to the European *Chærorrhinus squalidus*, Fairm.

1. *Chærorrhynchus tenuitarsis*, sp. n. (Tab. I. figg. 3, 3 a-c.)

Elongate, rather narrow, somewhat flattened above, opaque, alutaceous, nigro-piceous, the antennæ obscure ferruginous; sparsely clothed with fine, erect, pallid, blunt setæ, those on the elytra uniseriately arranged along each interstice, the depressions of the surface filled with a brownish incrustation. Head and rostrum densely, finely punctate. Prothorax about as long as broad, slightly rounded at the sides, the subtubulate anterior portion narrower; closely punctate. Elytra long, obliquely narrowing from the base, blunt at the apex as seen from above; seriate-punctate, the interstices feebly convex, flatter on the disc. Beneath sparsely punctate.

Length $3\frac{1}{8}$, breadth $1\frac{1}{3}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

One specimen, sex not ascertained.

Group TRYPETINA.

Trypetides, Lacordaire; *Trypetini*, Leconte and Horn.

Of the three genera referred to the Trypetina by Lacordaire, one, *Nanus*, Schönh. (= *Homaloxenus*, Woll.), is represented within our limits. This group is placed by him near the "Antliarhinides," and by Leconte and Horn near their "Derelomini." It seems to me that its proper position ought to be near the Cossonina—Wollaston, in fact, included *Homaloxenus** with some doubt amongst them, at the same time calling attention to the distinctly annulated antennal club, the strongly bilobed tarsi, the dentate femora †, the feebly unguiculate tibiæ, &c., as not being in accordance with the usual modifications of the Cossonid type.

Hoplorrhinus, Chevr. [provisionally placed under a separate group, Hoplorrhinina, in a preceding volume of this series, Coleopt. IV. pt. 4, pp. 277–279 (1903)], the

* His description is based on the male only.

† Some true Cossonids from New Zealand have strongly dentate femora.

contiguous anterior coxæ notwithstanding, would perhaps be better included under the Trypetina, a nearly allied genus (*Hoplorrhinoides*) with the anterior coxæ as widely separated as in *Nanus* being now known, all these insects having the rostrum somewhat similarly formed and differing greatly in the two sexes. *Hoplorrhinus** and *Hoplorrhinoides* include various subopaque elongate forms, which not only resemble *Derelomus* in colour and sculpture, but are of similar habits, species of each of these three genera being found upon the male-flowers of palms. *Nesoticus*, Perkins, from the Hawaiian Is., an insect living in the wood of *Cheirodendron* (order Araliaceæ), and *Sphæracus*, Faust, from Brazil, referred to the Cossonina and Cholina respectively by their describers, seem also to belong here.

NANUS.

Nanus, Schönherr, Gen. Curc. viii. 1, p. 89 (1844); Lacordaire, Gen. Col. vii. p. 179; Leconte and Horn, Class. Col. N. Am. 2nd edit. p. 484 (1883).

Homaloxenus, Wollaston, Trans. Ent. Soc. Lond. 1873, pp. 436, 470, 552 (♂); Leconte, Proc. Am. Phil. Soc. xv. p. 338 (1876).

The sexual characters are so marked in this genus that, as Lacordaire states, the males and females might be taken as belonging to different genera: in the former sex the rostrum is long, almost straight, and opaque, and the antennæ are inserted near the tip, and in the female the rostrum is short, slender, curved, and almost smooth, and the antennæ are inserted at its middle.

Two species inhabit Central America,

1. *Nanus uniformis*. (Tab. I. figg. 4, 4a, ♂; 5, ♀.)

Nanus uniformis, Boh. in Schönh. Gen. Curc. viii. 1, p. 90 (♂ ♀)¹; Lec. & Horn, Class. Col. N. Am. 2nd edit. p. 484².

Homaloxenus dentipes, Woll. Trans. Ent. Soc. Lond. 1873, p. 615 (♂)³; Lec. Proc. Am. Phil. Soc. xv. p. 338 (1876) (♀)⁴.

Hab. NORTH AMERICA, Florida^{2 4}.—MEXICO, Tlacotalpam near Vera Cruz (*Höge*).—ANTILLES, Cuba¹, Puerto Rico¹, San Domingo³.

Sent us in numbers from Vera Cruz, these specimens agreeing with others before me from the above-quoted Antillean localities. The elytra often have a black patch on the disc beyond the middle. The femora are dentate in the male and almost unarmed in the female. *N. uniformis* is described as glabrous, but the types must have been abraded. The Colombian *N. punctellus*, Boh., is said to be clothed with whitish pubescence and to have the disc of the prothorax flat.

* Specimens of *H. crispus*, from Cacao, Treee Aguas, Alta Vera Paz, Guatemala (*Schwarz and Barber*), have recently been sent to me for determination by the U.S. Nat. Museum. The two examples described by me were both of the female sex (not ♂ and ♀ as stated): the male (as is that of *H. mexicanus*) has a straighter, stouter, carinate, rugosely punctate rostrum, the antennæ inserted towards the tip, and the metasternum and first ventral segment broadly excavate.

2. *Nanus hispidus*, sp. n. (Tab. I. figg. 6, 6 a, ♂ ; 7, ♀.)

Elongate, depressed, moderately shining, the rostrum opaque in the ♂, black or piceous, the shoulders or basal portion of the elytra, antennæ, tarsi, and base of the femora more or less rufescent; very finely and sparsely pubescent, the prothorax and elytra also somewhat thickly clothed with decumbent, ochreous setæ, those on the elytra uniseriately arranged down each interstee, the under surface with an extremely fine sericeous pubescence. Head densely, minutely punctate; rostrum (♂) usually as long as or longer than the head and prothorax, almost straight, parallel-sided to near the tip, and densely strigoso-punctate, (♀) slender, arcuate, not longer than the prothorax, shining, and almost smooth. Prothorax broader than long, somewhat rounded at the sides, abruptly constricted in front, broadly depressed down the middle of the disc; densely, shallowly punctate, the narrow interspaces alutaceous. Elytra elongate, much wider than the prothorax, punctate-striate, the interstices feebly convex, densely, minutely punctate, and each with a row of larger, asperate, setigerous impressions. Beneath very densely, minutely punctate. Metasternum deeply sulcate down the middle for the apical two-thirds of its length. Legs elongate; femora in both sexes strongly clavate and very sharply dentate. Length 3-4½, breadth 1-1½ millim. (♂ ♀.)

Hab. PANAMA, Bugaba, Tolé (*Champion*).

Numerous examples, males predominating, the latter varying greatly in size and in the length of the rostrum. Immature examples are entirely ferruginous. This species is separable at once from *N. uniformis* by its setose elytra.

HOPLORRHINOIDES, gen. nov.

Rostrum elongate, slender, widened at the tip, dissimilarly formed in the two sexes—(♂) feebly curved, flattened, punctured, and carinate, (♀) shorter, much more slender, and almost smooth,—the scrobes lateral, broad and deep in the ♂, reaching the eyes, the antennæ inserted at or beyond the middle in ♂ and at about the basal third or fourth in ♀; eyes very large, lateral, coarsely faceted; mandibles prominent, curved, sharply dentate within; antennæ slender, the funiculus 7-jointed, the joints obconic and decreasing in length, the club pointed, annulate, and with a long, shining, conical basal joint; prothorax suboval, truncate and sinuately margined at the base; scutellum flattened, moderately large; elytra elongate, not or very slightly wider than the prothorax, produced at the tip; anterior and intermediate coxæ exerted, each separated by at least one-half their own width; first ventral suture sinuate, the others straight; legs elongate; femora clavate and towards the apex sharply dentate, the anterior pair stout at the base; tibiæ rounded and unarmed at the outer apical angle; tarsi pilose beneath, the third joint strongly bilobed, the anterior pair dilated and with long projecting hairs in the ♂, the claws long and divergent; body elongate, subcylindrical, coriaceous, very finely pubescent, testaceous.

Type, *H. attaleæ*.

The two immature-looking insects belonging to this genus are nearly related to *Hoplorrhinus*, from which they differ in their somewhat widely separated anterior and intermediate coxæ, the more feebly pedunculate femora, and the deep, laterally-placed rostral scrobes of the male, the anterior tarsi, too, being dilated and very hairy in this sex. *Sphæracus*, Faust, from Brazil, seems to approach *Hoplorrhinoides* in many of its characters.

1. *Hoplorrhinoides attaleæ*, sp. n. (Tab. I. figg. 8, 8 a, ♂ ; 9, ♀.)

Elongate, opaque, pale testaceous, the eyes black, the rostrum piceous or ferruginous, the anterior knees and scutellum black in one specimen; the pubescence sparse, pallid, and inconspicuous. Head shallowly foveate between the eyes; rostrum (♂) a little longer than the head and prothorax, flattened, with the

basal portion multicarinate, the apical portion closely punctured, and the antennæ inserted at about the middle (in the second specimen shorter, with an undulate ridge on each side, a fine carina down the middle, and the antennæ inserted nearer the tip), (♀) slender, arcuate, smooth from near the base, and the antennæ inserted at about the basal third, joints 1 and 2 of the funiculus elongate in both sexes, 3-5 decreasing in length. Prothorax somewhat conical and about as long as broad in the ♂, a little shorter and more rounded at the sides in the ♀, closely, minutely, or subobsoletely punctate. Elytra finely punctate-striate, the interstices feebly convex or flat, subgranulate in one specimen. Beneath sparsely, obsoletely punctate. Anterior tarsi of the ♂ dilated and clothed with long, laterally projecting, pallid hairs.

Length 7-8, breadth $2\frac{1}{3}$ - $2\frac{3}{4}$ millim. (♂ ♀.)

Hab. GUATEMALA, Cacao, 800 feet, near Trece Aguas, in Alta Vera Paz (*Schwarz and Barber, in U.S. Nat. Mus.*).

Two males and two females, the former varying in the length and sculpture of the rostrum, and in the point of insertion of the antennæ. The sculpture of the prothorax and elytra varies also in the different specimens of each sex; but as all four are labelled as having been found on the male-flowers of *Attalea cohune* (the large palm of the region), and the general coloration is similar to that of *Derelomus* (species of which are known to attack *Chamærops*), this cannot be altogether due to immaturity.

2. *Hoplorrhinoides pallidus*, sp. n.

♀. Very like the same sex of *H. attaleæ*, but with the rostrum straighter and considerably longer than the head and prothorax, striate-punctate at the base; joint 2 of the funiculus much shorter than 1; the prothorax strongly transverse, rapidly narrowing from the middle forwards, shining, densely, minutely punctate; the elytra obsoletely punctate-striate, the interstices flat and coriaceous.

Length $6\frac{1}{3}$, breadth $2\frac{1}{3}$ millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

One immature specimen, set aside years ago for want of further material. It probably lives upon the male-flowers of a different palm from that attacked by *H. attaleæ*, *Attalea cohune* being absent, I believe, from the Pacific slope of Chiriqui.

Group COSSONINA.

The Cossonids are usually treated either as a separate Family of the Rhynchophora or as a subfamily of the Calandridæ, but they seem to be best placed under the Curculioninæ, the group "Acamptina" connecting them to a certain extent with the Cryptorrhynchina. Wollaston's arrangement (1873) is here followed, except that the Scolytiform Rhyncolides are dismembered from the Cossonides (following Leconte and Horn), and that certain Trypetid and Hylobiid genera are altogether excluded. The typical forms are mainly recognizable, apart from their general facies, by the claw-like prolongation of the outer apical angle of the tibiæ (this being concave within in various highly developed genera, such as *Rhopalomesites*, &c.), and the feebly emarginate or simple third tarsal joint; but these characters are not always diagnostic, the tibiæ sometimes being unarmed at the apex and the third tarsal joint bilobed. The Cossonina

are particularly well represented in such Oceanic islands as St. Helena, Madeira, the Canaries, the Hawaiian group, New Zealand, &c., and some of them are recorded as having been carried immense distances across the ocean in floating drift-wood.

Sect. DRYOPHTHORIDES.

Dryophthorides, Lacordaire, Wollaston.

The species of this section are easily identified by their 4-jointed funiculus, the 5-jointed tarsi, the strongly unguiculate tibiae, and the peculiar silky pruinosity of the surface of the body.

DRYOPHTHORUS.

Dryophthorus, Schönherr, Curc. Disp. Meth. p. 332 (1826); Gen. Curc. iv. p. 1088; Lacordaire, Gen. Col. vii. p. 322; Wollaston, Trans. Ent. Soc. Lond. 1873, pp. 434, 442, 506.

A very widely distributed genus and particularly numerous in species in the northern Pacific islands*, no less than seventeen being recorded by Mr. Perkins from the Hawaiian group. The holarctic *D. corticalis*, Payk. (*lymexylon*, F., *americanus*, Bed.), is said to attack oak and alder.

1. *Dryophthorus quadricollis*, sp. n. (Tab. I. fig. 10.)

Moderately elongate, opaque, black, the scape of the antennae and the tarsi ferruginous, the surface with a greyish sericeous pruinosity. Head closely punctate; eyes transverse, small, depressed, coarsely faceted; rostrum very stout, moderately long, slightly dilated opposite the points of insertion of the antennae, closely punctate, smooth, bare, and shining at the tip, the antennae inserted towards the base. Prothorax as long as broad, subquadrate, abruptly constricted in front; closely punctate. Elytra comparatively short, widening to about the basal third and narrowed thence to the apex, which is somewhat produced; coarsely seriate-punctate, the interstices raised, about as wide as the punctures on the disc and becoming narrower towards the sides.

Length $2\frac{1}{2}$ – $2\frac{5}{8}$, breadth 1 millim. (♀?)

Hab. GUATEMALA, Totonicapam 8500–10,500 feet (*Champion*).

* *Dryophthorus cocosensis*, sp. n.—Oblong-ovate, opaque, nigro-piceous or piceous, the antennal club ferruginous; the surface (when cleaned) clothed with a very fine greyish pruinosity, and the elytral interstices each with a row of extremely minute scales. Head and rostrum densely, rugosely punctate; rostrum stout, parallel-sided, slightly constricted at the base; antennal scape widened from near the base; eyes large and depressed. Prothorax about as long as broad, strongly constricted in front, coarsely, densely punctate. Elytra much wider than the prothorax, rounded-subtriangular; coarsely seriate-punctate, the interstices raised and much narrower than the punctures. Tarsi very short.

Length $1\frac{7}{8}$ – $2\frac{1}{3}$, breadth $\frac{4}{5}$ –1 millim.

Hab. Cocos I.

Sent in abundance (with a species of *Anchonus*) by the late P. Biolley, the specimens labelled as having been found in January 1902. This island belongs politically to Costa Rica, but it is situated so far from the Pacific coast that the locality has not been included within the limits of this work. The species may be known by its comparatively short, subtriangular elytra, with narrow raised interstices, the short tarsi, and the broad scape of the antennae.

Six examples. Less elongate than *D. corticalis*, Payk., the rostrum with a rather larger bare shining space at the tip, the prothorax subquadrate, the elytra shorter, more dilated at the sides below the base and more narrowed and attenuate at the tip. When cleaned, the surface is so strongly pruinose as to appear plumbeous or greyish.

STENOMMATUS.

Stenommatius, Wollaston, Trans. Ent. Soc. Lond. 1873, pp. 434, 442, 506, 595.

The only tangible characters by which *Stenommatius* can be distinguished from *Dryophthorus* appear to be the comparatively slender, curved rostrum and the narrower eyes. The supposed difference in the form of the vestiture is due to the mud-like incrustation on the specimens of *Dryophthorus* examined by Wollaston.

1. *Stenommatius fryi*.

Stenommatius fryi, Woll. Trans. Ent. Soc. Lond. 1873, p. 595¹.

Hab. MEXICO (*coll. Fry*¹).

The unique type of this species appears to be a female.

2. *Stenommatius sulcifrons*, sp. n. (Tab. I. fig. 11.)

Moderately elongate, narrow, depressed, opaque, nigro-piceous, the antennæ (the club excepted), tip of the rostrum, eyes, and tarsi ferruginous, the femora and tibiæ piceous, the surface with a greyish pruinosity, the punctures each bearing a minute metallic scale. Head closely punctate, shallowly sulcate between the eyes; eyes somewhat prominent, strongly transverse, moderately large, coarsely faceted, separated above by about the width of the apex of the rostrum; rostrum rather slender, moderately long, abruptly dilated opposite the points of insertion of the antennæ, closely punctate, the outer half of the apical portion smooth, shining, and bare, the basal portion sulcate, the antennæ inserted at the middle and with an elongate scape. Prothorax narrow, about as long as broad, subquadrate, strongly constricted in front, closely punctate. Elytra moderately long, somewhat oval, conjointly, subtriangularly produced at the apex; coarsely seriate-punctate, the interstices raised. Legs short, rather slender.

Length $2\frac{1}{8}$, breadth $\frac{3}{4}$ millim. (♂.)

Hab. PANAMA, Volcan de Chiriqui 4000 feet (*Champion*).

One specimen. Narrower than the Mexican *S. fryi*; the rostrum sulcate down the basal half, narrower at the tip, the smooth apical space less extended, and the pterygia very prominent; the eyes somewhat prominent and more approximate above.

Sect. PENTARTHIDES.

Pentarthrides, Wollaston.

The 5-jointed funiculus is the essential character of *Pentarthrum* and the other genera of this section; *Tomolips*, Woll. (= *Wollastonia*, Horn*), however, has a similar number of antennal joints, but, as Wollaston says, it is so obviously related

* This name is preoccupied for a fossil beetle described by Heer.

to *Hexarthrum* that it must be placed near it. *Dryotribus mimeticus*, Horn (= *Thalattodora insignis*, Perkins), from Key West, Florida, &c., has been introduced into the Hawaiian Is., and it occurs also in Mustique Island, one of the Grenadines. This insect somewhat resembles *Dryophthorus* and *Chærorrhinus*, but has the eyes placed on the rostrum, as in *Dioprophorus*, *Ithaura*, and *Theognete*, genera placed near *Anchonus* in this work*. In all the Pentarthrides the metathoracic episterna are almost or quite covered by the inflexed margin of the elytra, as in *Dryophthorus*.

PENTARTHURUM.

Pentarthrum, Wollaston, Ann. Nat. Hist. (2) xiv. p. 129 (1854); Trans. Ent. Soc. Lond. (2) v. p. 397 (1861); *ibid.* 1873, pp. 434, 446, 513, 598; Lacordaire, Gen. Col. vii. p. 324.

A widely distributed genus, the type of which is the European *P. huttoni*, Woll. The only Central-American species that can be satisfactorily referred to it is *P. cylindricum*, Woll., originally described from introduced examples found in the Island of Ascension. In this latter insect the anterior coxæ are more approximate, and the tarsi more slender than in *P. huttoni*. *Pentarthrum* appears to be especially well represented in New Zealand, but some of the forms from that country will certainly have to be eliminated.

1. *Pentarthrum cylindricum*. (Tab. I. fig 12.)

Pentarthrum cylindricum, Woll. Trans. Ent. Soc. Lond. (2) v. p. 398, t. 19. figg. 5, 5 a¹; *ibid.* 1873, p. 653²; Champ. Ent. Monthly Mag. xlv. p. 104³.

Hab. HONDURAS³ (*Sallé*); NICARAGUA³, Chontales (*Janson*); PANAMA, Tolé³ (*Champion*).—BRAZIL², Rio Janeiro³ (*coll. Fry*).

Wollaston¹ states that the specimens of this species found by Mr. Bewicke in the decayed wood at the bottom of some boxes, possibly used to import plants, in Ascension, might have come from the Cape of Good Hope or Mauritius; later², he adds, "Brazil" and "Malay Is." as localities. There can be no doubt, however, that the home of this insect is in Tropical America. Three examples only have been received from within our limits, one of which is shown on our Plate, Wollaston's figure being too elongate.

RHINANISUS.

Rhinanisus, Broun, New Zealand Journ. Sci. i. p. 489 (1883).

Various small, elongate, depressed Central- and S.-American forms, with the rostrum rather long, slender, and widened outwards (especially in the male), the eyes depressed, the basal portion of the head globose and abruptly separated from the anterior portion, the elytra pilose or setose at the apex, and the anterior coxæ narrowly separated, agree

* Cf. Col. iv. 4, pp. 92-97.

sufficiently with the species of *Rhinanisus* (type, *Pentarthrum fulvicorne*, Broun), from New Zealand, to be included in the same genus. The tarsi are comparatively stout in *R. pilicauda*.

The American forms may be tabulated thus:—

- a. Tarsi with the 3rd joint comparatively broad, distinctly emarginate; the basal joints rather narrow.
 - a¹. Rostrum considerably widened towards the tip in the ♂; eyes rather large: species larger and more robust *hirtipennis*.
 - b¹. Rostrum very feebly widened towards the tip in both sexes: species smaller and narrower.
 - a². Elytra very elongate and depressed; eyes small.
 - a³. Rostrum relatively stouter; ventral segments 1 and 2 broadly sulcate in the ♂ *ventralis*.
 - b³. Rostrum more slender; elytra flatter *planatus*.
 - b². Elytra shorter and less depressed.
 - a⁴. Body piceous; elytral interstices very feebly convex; eyes larger . . . *tenuiculus*.
 - b⁴. Body ferruginous; elytral interstices flat; eyes smaller [*peruanus**.]
- b. Tarsi shorter, with the 3rd joint very little wider than the first and second, these latter comparatively stout; elytra as in *R. tenuiculus*; eyes rather large. *pilicauda*.

1. *Rhinanisus hirtipennis*, sp. n. (Tab. I. fig. 13, ♂.)

Elongate, narrow, depressed, moderately shining, finely alutaceous, fusco-castaneous, the eyes, the space between them, and the under surface blackish; clothed with a very fine scattered pubescence, the elytra with longer, semierect, pallid, setiform hairs at the apex. Head (the globose basal portion excepted) somewhat coarsely punctate; eyes rather large; rostrum nearly as long as the posterior portion of the prothorax, slender and sparsely punctured in the ♀, a little shorter, stouter, considerably widened towards the tip, and more closely punctured in the ♂, the antennæ inserted at about the basal third (♂) or fourth (♀), the scape reaching the posterior limit of the eyes. Prothorax a little longer than broad, abruptly constricted in front, somewhat rounded at the sides and gradually narrowing from the middle forwards, closely punctate. Scutellum small, transverse. Elytra elongate, flattened, slightly wider than the prothorax, subparallel in their basal two-thirds; closely punctate-striate, the interstices narrow and feebly uniseriate-punctate, the punctures becoming more conspicuous on the apical declivity. Beneath closely, finely punctate; ventral segments 1 and 2 sulcate down the middle in the ♂. Tarsi rather stout.

Length $3\frac{1}{2}$, breadth $\frac{9}{10}$ millim. (♂ ♀.)

* *Rhinanisus peruanus*, sp. n.—Elongate, narrow, depressed, faintly alutaceous, shining, ferruginous, the eyes black, the elytra with numerous erect pallid setæ at the apex. Head and rostrum somewhat coarsely, closely punctate, the rostrum subcylindrical, very slightly widened towards the tip: eyes small. Prothorax longer than broad, constricted in front, rather sparsely punctate. Elytra moderately elongate, parallel in their basal half, coarsely seriate-punctate, the punctures placed along faint striæ, the interstices flat. Length $2\frac{1}{8}$ millim. (♀?)

Hab. PERU, Maropan (coll. Fry, in Mus. Brit.).

One specimen. Near *R. tenuiculus*, but more depressed, entirely ferruginous in colour (the eyes excepted), the elytral interstices flat. Very like the New Zealand *R. fulvicornis*, but smoother and less pubescent (except at the apex), the anterior coxæ more approximate.

Hab. PANAMA, Volcan de Chiriqui 8000 feet (*Champion*).

One pair, found under bark, in June 1882, in the bamboo-thickets at the highest point reached by the present writer on the slope of the Volcan de Chiriqui. Larger and broader than the other American species referred to *Rhinanisis*, the rostrum considerably widened towards the tip in the male, the antennæ inserted nearer its base, the anterior coxæ a little less approximate.

2. *Rhinanisis ventralis*, sp. n. (Tab. I. fig. 14.)

Very elongate, narrow, depressed, moderately shining, finely alutaceous, varying in colour from piceous to ferruginous, the rostrum, antennæ, and legs constantly ferruginous, the head and prothorax often blackish and darker than the elytra; clothed when fresh with a very fine scattered pubescence, which is more distinct on the lower than on the upper surface, the elytra with some conspicuous fine, semierect, pallid, setiform hairs at the apex. Head (the globose basal portion excepted) closely and somewhat coarsely punctate; eyes small; rostrum slender, slightly widened towards the tip, feebly curved, about as long as the prothorax, sparsely punctate, the antennæ inserted at the middle in both sexes. Prothorax as long as broad, slightly rounded at the sides, narrowed and strongly constricted in front, closely punctate. Elytra very elongate, slightly wider than the prothorax, subparallel for about three-fourths of their length; closely punctate-striate, the interstices narrow and each with a row of minute scattered punctures, which become more distinct on the apical declivity. Beneath closely, finely punctate; ventral segments 1 and 2 broadly sulcate down the middle in the ♂. Tarsal joints 1 and 2 slender.

Length $2\frac{1}{10}$ – $2\frac{3}{10}$, breadth $\frac{2}{5}$ – $\frac{3}{5}$ millim. (♂ ♀.)

Hab. GUATEMALA, El Tumbador, Las Mercedes, Cerro Zunil, Senahu (*Champion*).

Sixteen specimens, all but one from the Pacific slope and from elevations between 2500 and 5000 feet. Very variable in size and colour, and mainly distinguishable by the closely and coarsely punctured black head, and the conspicuous pallid setiform hairs on the apical portion of the elytra. The single (♂) example from Senahu is larger and darker than the others, and has the elytral interstices more distinctly uniseriate-punctate; it has, however, the ventral segments 1 and 2 sulcate, as in the typical males from Cerro Zunil.

3. *Rhinanisis planatus*, sp. n. (Tab. I. fig. 15.)

Very elongate, narrow, strongly depressed, moderately shining, finely alutaceous, castaneous, the eyes and the exposed portion of the head black, the under surface piceous, the apex of the elytra and the under surface clothed with a few fine hairs. Head (the globose basal portion excepted) closely and somewhat coarsely punctate; eyes small; rostrum slender, feebly curved, cylindrical, about as long as the prothorax, very sparsely punctate laterally, smooth along the centre, the antennæ inserted just behind the middle. Prothorax as long as broad, rounded at the sides, narrowing forwards and strongly constricted in front, closely punctate. Elytra very elongate, flattened, subparallel for nearly four-fifths of their length; closely punctate-striate, the interstices narrow, faintly uniseriate-punctate. Beneath rather sparsely, somewhat coarsely punctured. Tarsal joints 1 and 2 slender.

Length $2\frac{3}{5}$ – $2\frac{4}{5}$, breadth $\frac{1}{2}$ – $\frac{3}{5}$ millim. (♀?)

Hab. PANAMA, Peña Blanca 3000 feet (*Champion*).

Two specimens. A very elongate form allied to *R. ventralis*, with the rostrum a

little longer, smoother, and more slender, the elytra somewhat longer, flatter, and parallel to near the tip, the under surface not so closely punctate. In both species the eyes are small and separated by a narrow space from the transverse furrow behind them.

4. *Rhnanisus tenuiculus*, sp. n.

Elongate, narrow, moderately depressed, finely alutaceous, shining, piceous, the antennæ, tip of the rostrum, apical margin of the elytra, and legs reddish; clothed with scattered minute hairs, which become longer and setiform at the apex of the elytra. Head and rostrum sparsely, finely punctate, the rostrum rather slender and subcylindrical, the antennæ inserted behind the middle. Prothorax a little longer than broad, gradually narrowing from the rounded hind angles, strongly constricted in front, finely, somewhat closely punctate. Elytra moderately long, subparallel in their basal half, closely punctate-striate, the interstices feebly convex, faintly uniseriate-punctate, the punctures becoming more distinct at the apex. Beneath sparsely, finely punctate. Tarsi with joints 1 and 2 rather slender, 4 long and narrow.

Length $2-2\frac{2}{5}$, breadth $\frac{1}{2}-\frac{3}{5}$ millim. (♀.)

Hab. GUATEMALA, Dueñas, Atlantic slope (*Champion*).

Two specimens. Extremely like *R. pilicauda*, but easily separable therefrom by the longer and more slender tarsi, the prothorax, too, is a little more coarsely and sparsely punctured. Less elongate than *R. ventralis* and *R. planatus*, the prothorax less rounded at the sides, the elytra distinctly more convex.

5. *Rhnanisus pilicauda*, sp. n.

Elongate, narrow, moderately depressed, finely alutaceous, shining, piceous, the antennæ and humeri reddish; clothed with scattered minute hairs, which become longer, erect, and setiform at the apex of the elytra. Head and rostrum sparsely punctate, the rostrum slender and almost straight in the ♀, and a little shorter, stouter, and more curved in the ♂, the antennæ inserted behind the middle, the eyes slightly prominent. Prothorax longer than broad, suboval, strongly constricted in front, closely, finely punctate. Elytra moderately long, subparallel in their basal half; closely punctate-striate, the interstices faintly uniseriate-punctate, the punctures becoming more distinct at the apex. Beneath finely, rather sparsely punctate; first ventral segment slightly depressed down the middle in the ♂. Tarsi stout, comparatively short, the third joint feebly emarginate.

Length $2\frac{1}{2}$, breadth $\frac{2}{5}$ millim. (♂ ♀.)

Hab. GUATEMALA, Chiacam in Alta Vera Paz (*Champion*).

One pair. Differs from the other species of the genus in the rather short, stout tarsi. The setiform pallid hairs at the apex of the elytra are conspicuous.

STENOTRUPIS.

Stenotrupis, Wollaston, Trans. Ent. Soc. Lond. 1873, pp. 434, 447, 515, 602.

? *Diadimorpha*, Broun, New Zealand Journ. Sci. i. p. 489 (1883).

The two forms referred to this genus by Wollaston are from the Malay Islands* and Cuba respectively. The one now added is the first to be recorded from the

* *S. exilis*, Pasc., from Aru, is based on two different species, the female being a true *Stenotrupis* and the male belonging to a very different genus, *Coptus*, Woll. The two sexes of the Malayan *S. crassifrons* were described by Wollaston.

American mainland. They are elongate, narrow, minute, depressed forms, with a strongly exerted head and a 5-jointed funiculus. The New Zealand insects forming the types of *Diædimorpha*, Brunn, seem to me to be scarcely separable from *Stenotrupis*.

1. *Stenotrupis ovaticeps*, sp. n. (Tab. I. fig. 16.)

Elongate, very narrow, depressed, shining, rufo-testaceous, the eyes and the space between them black; sparsely, very finely pubescent, the pallid hairs becoming longer and more conspicuous towards the apex of the elytra. Head strongly exerted, ovate, sparsely punctate; rostrum a little longer than the head, slender, slightly widening outwards, sparsely punctate, the antennæ inserted at about the basal third, the funiculus and scape slender. Prothorax a little longer than broad, subconical, constricted in front, the sides rounded at the base; sparsely impressed with rather coarse oblong punctures. Elytra elongate, widening to a short distance below the base and subparallel thence to near the apex, the apex itself bluntly rounded; closely seriate-punctate, the interstices flat and alutaceous. Beneath somewhat coarsely, rather sparsely punctate. Legs moderately stout.

Length $1\frac{2}{3}$, breadth $\frac{1}{3}$ millim. (♀ ?)

Hab. PANAMA, Bugaba (*Champion*).

One specimen. Allied to the Cuban and San Domingo *S. acicula*, Woll. (= *Catolethrus palmeus*, Schönh., in litt., in coll. Pascoe), but less depressed, the head a little shorter, the prothorax less elongate, the seriate punctures on the elytra more scattered, and the bristly hairs at the apex not so conspicuous.

PSEUDOPENTARTHURUM.

Pseudopentarthrum, Wollaston, Trans. Ent. Soc. Lond. 1873, pp. 434, 445, 512, 597; Casey, Ann. N. York Acad. Sci. vi. p. 696.

Phleophaenomorphus, Wollaston, loc. cit. pp. 434, 445, 511, 596.

? *Pentarthrinus*, Casey, loc. cit. p. 698 (1902).

This genus has its headquarters in Mexico and Guatemala, extending northwards into the United States and southwards into Colombia.

The numerous new forms now added, three only of which have been obtained in any numbers, connect Wollaston's genera, which cannot be maintained as distinct*, and it is probable that *Pentarthrinus* also will have to be sunk under *Pseudopentarthrum*.

The species are all of small size, subcylindric or conico-cylindric in shape, and mostly black or castaneous, with the surface bare and shining. The Central-American representatives may be roughly grouped thus:—

Head flattened or, at most, very slightly depressed between the eyes. [PSEUDOPENTARTHURUM, Woll.]

Rostrum distinctly grooved down the middle towards the base.

The groove extending upwards on to the interocular portion of the head . . . Species 1.

* Other unnamed forms from the West Indies (from Cuba and Montserrat) are contained in the U.S. Nat. Museum. Mr. H. H. Smith has also captured a species in Grenada.

- The groove not extending on to the head Species 2.
 Rostrum without definite median groove towards the base Species 3-6.
 Head transversely depressed and more or less distinctly foveate between the eyes.
 [PHLEOPHAGOMORPHUS, Woll.]
 Rostrum distinctly grooved down the middle towards the base Species 7.
 Rostrum obsoletely grooved down the median third Species 8.
 Rostrum without definite median groove Species 9-13.

1. *Pseudopentarthrum lineifrons*, sp. n.

Moderately elongate, convex, subcylindrical, shining, black, the antennæ and tarsi ferruginous. Head very sparsely, minutely punctate, flattened and feebly longitudinally sulcate between the somewhat prominent eyes, the fine median groove extending forwards along the basal half of the rostrum, the rostrum itself very short and broad, closely punctate, and with its apical portion transversely quadrate. Prothorax nearly as long as broad, subconical, obsoletely constricted in front, closely, rather finely punctate. Elytra comparatively short, much wider than the prothorax, convex, parallel in their basal half, with rows of subapproximate punctures placed along faintly-impressed narrow striæ, the interstices narrow, almost flat, and finely uniseriate-punctate.

Length 2, breadth $\frac{4}{5}$ millim.

Hab. GUATEMALA, Dueñas (*Champion*).

A small, moderately elongate, convex form, with a very short, broad, finely sulcate rostrum, the head without transverse frontal depression, the prothorax rather narrow and subconical, the elytra comparatively short and cylindrical, closely seriate-punctate, and with narrow, distinctly uniseriate-punctate interstices. One specimen.

2. *Pseudopentarthrum angustulum*, sp. n.

Moderately elongate, narrow, subcylindrical, convex, shining, black, the antennæ, tibiæ, and tarsi ferruginous. Head very sparsely, conspicuously punctate, slightly depressed between the eyes, the latter small; rostrum short, stout, slightly constricted at the base, sparsely punctate, the basal portion faintly sulcate anteriorly. Prothorax as long as broad, convex, slightly narrowing forwards, feebly constricted in front, closely, somewhat coarsely punctate, with indications of a smooth median line. Elytra broader than the prothorax, very gradually widened to a little beyond the middle and then arcuately narrowed to the apex; rather coarsely punctate-striate, the sutural stria deeply impressed, the interstices somewhat convex and each with a row of scattered extremely minute punctures.

Length $2\frac{1}{10}$, breadth $\frac{4}{5}$ millim.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

One specimen. A small, narrow, convex, posteriorly widened form, with the head very slightly depressed between the eyes, the basal portion of the rostrum faintly sulcate anteriorly, the puncturing of the prothorax and elytra coarse.

3. *Pseudopentarthrum mexicanum*, sp. n.

Moderately elongate, conico-cylindric, shining, black, the antennæ and tarsi ferruginous. Head with a few scattered punctures, slightly depressed and obsoletely longitudinally grooved between the eyes, the latter rather large; rostrum very short and stout, sparsely punctate, the basal portion obsoletely grooved anteriorly. Prothorax about as long as broad, convex, oval, scarcely constricted in front, closely, uniformly punctate. Elytra broader than the prothorax, gradually widened to about the middle; with

rows of coarse punctures placed along faint striæ, the sutural stria deeply impressed, the interstices feebly convex and obsoletely uniseriate-punctate.
Length $2\frac{1}{4}$, breadth $\frac{7}{8}$ millim.

Hab. MEXICO, "Sierra de Durango" (*Höge, ex coll. Solari*).

One specimen. Extremely like *P. angustulum*, and perhaps the sexual complement of that species, but broader behind, with a shorter and stouter rostrum, which is indistinctly grooved anteriorly, the scrobes extending back to the eyes and then running downwards, the eyes themselves a little larger. The rostrum is similar to that of *P. planifrons*, but this last-mentioned insect has the elytra parallel and striate near the suture only and the prothorax more sparsely punctured.

4. *Pseudopentarthrum planifrons*, sp. n.

Moderately elongate, subcylindrical, shining, black, the antennæ and tarsi ferruginous. Head very sparsely punctate, almost unimpressed between the eyes; rostrum very short and stout, finely punctate. Prothorax about as long as broad, oval, feebly constricted in front, somewhat closely punctate. Elytra considerably wider than the prothorax, moderately long, parallel in their basal half, coarsely seriate-punctate, the punctures placed along fine, shallow striæ near the suture and becoming smaller and more scattered towards the sides, the sutural striæ deeply impressed from a little below the base, the interstices flat and obsoletely uniseriate-punctate. Beneath sparsely, finely punctate. Anterior coxæ subcontiguous.

Length $2\frac{1}{4}$, breadth $\frac{5}{8}$ millim.

Hab. GUATEMALA, Chacoj in the Polochic valley (*Champion*).

One specimen. This is a true *Pseudopentarthrum*, following Wollaston's diagnosis, and nearly related to *P. brevirostre*, differing from that insect in the relatively narrower prothorax and the more scattered seriate punctures on the elytra, those near the suture coarser and the sutural stria deeply impressed.

5. *Pseudopentarthrum brevirostre*, sp. n. (Tab. I. fig. 17.)

Moderately elongate, subcylindrical, rather convex, shining, black, the antennæ, tibiae, and tarsi more or less ferruginous. Head sparsely, minutely punctate, obsoletely foveate and almost unimpressed between the eyes; rostrum extremely short, stout, subquadrate, closely, finely punctate, the anterior portion with a very faint median groove in one specimen (?accidental). Prothorax scarcely broader than long, oval, constricted in front, closely punctate. Elytra moderately long, very little wider than the prothorax, parallel in their basal half, with rows of moderately coarse punctures placed in shallow striæ, the sutural line only deeply impressed, the interstices almost flat and obsoletely uniseriate-punctate.

Length $2\frac{3}{8}$, breadth $\frac{9}{16}$ millim.

Hab. MEXICO, Jalapa (*Höge*), Motzorongo (*Flohr*).

Two specimens. Very near *P. phlæophagoides*, Woll., but differing from the unique type of that insect in its rather larger size and more elongate shape, the more rounded sides of the prothorax, and the less raised elytral interstices. The head is almost unimpressed between the eyes and the rostrum extremely short as in Wollaston's species, the type of the genus *Pseudopentarthrum*. The relatively broad prothorax separates *P. brevirostre* from the other allied forms.

6. *Pseudopentarthrum phlæophagoides*.

Pseudopentarthrum phlæophagoides, Woll. Trans. Ent. Soc. Lond. 1873, p. 597¹.

Hab. MEXICO (*Truqui, in coll. Fry*¹).

This species, the unique type of which is in the British Museum, may be known from the allied forms by its small size, the extremely short rostrum, the unimpressed head, the densely punctured, somewhat parallel-sided prothorax, and the cylindrical elytra.

7. *Pseudopentarthrum incisum*, sp. n.

Elongate, subcylindrical, shining, dilute fusco-castaneous, the under surface, head, and femora blackish. Head sparsely punctate, strongly, transversely depressed between the eyes; rostrum short, stout, slightly constricted at the base; closely punctate, the apical portion subquadrate, the basal portion narrowly sulcate down the middle. Prothorax slightly broader than long, oval, constricted in front, closely punctate. Elytra somewhat depressed, elongate, considerably wider than the prothorax, subparallel for two-thirds of their length, conjointly rounded at the apex; coarsely crenate-striate, the interstices convex and obsoletely uniseriate-punctate.

Length $2\frac{3}{4}$, breadth 1 millim.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

One specimen. Nearly related to the Colombian *P. (Phlæophagomorphus) angusticollis*, Woll. (the unique type of which is similarly coloured, perhaps due to immaturity), but smaller and more depressed, the rostrum faintly sulcate, the prothorax shorter and with the sides more rounded, the elytra flatter and with rather narrower interstices. The elongate, narrow shape, the distinctly sulcate rostrum, the coarsely crenate-striate elytra, &c., distinguish *P. incisum* from its nearest allies.

8. *Pseudopentarthrum subcylindricum*, sp. n.

Moderately elongate, subcylindrical, convex, shining, black, the antennæ and tarsi ferruginous. Head very sparsely, minutely punctate, strongly, transversely depressed and shallowly foveate between the eyes; rostrum very short and stout, closely punctate, faintly sulcate along the median third. Prothorax slightly broader than long, oval, feebly constricted in front, closely, finely punctate. Elytra moderately long, convex, much wider than the prothorax, parallel in their basal half; with rows of subapproximate small punctures, which are placed in shallow striae towards the suture, the interstices broad, almost flat, obsoletely uniseriate-punctate.

Length $2\frac{1}{2}$, breadth $\frac{9}{10}$ millim.

Hab. GUATEMALA, Zapote, Pacific slope (*Champion*).

One specimen. A moderately elongate, convex, subcylindrical form, with the front transversely excavate, the prothorax finely punctate, and the elytra with smaller seriate punctures than usual. *P. subcylindricum* is more convex than *P. depressifrons*, an insect occurring at the same locality, and has a relatively shorter rostrum and more finely seriate-punctate elytra.

9. *Pseudopentarthrum limbatum*, sp. n. (Tab. I. fig. 18.)

Elongate, conico-cylindric, shining, black, the sides of the elytra broadly rufescent (leaving an attenuate black sutural stripe), the antennæ, tibiæ, and tarsi ferruginous. Head sparsely punctate, transversely depressed and feebly foveate between the eyes; rostrum very short, stout, closely punctate. Prothorax broader than long, suboval, constricted in front, closely, rather coarsely punctate. Elytra much broader than the prothorax, moderately long, gradually widened to beyond the middle and somewhat produced at the apex; with rows of moderately coarse punctures placed along narrow shallow striæ, the punctures becoming smaller and more scattered towards the sides, the interstices broad, almost flat, and finely uniseriate-punctate. Beneath sparsely, finely punctate.

Var. The elytra indeterminately rufescent towards the tip only.

Length $2\frac{3}{4}$ – $3\frac{2}{5}$, breadth $1\frac{1}{6}$ – $1\frac{1}{4}$ millim.

Hab. MEXICO, Motzorongo (*Flohr*); GUATEMALA, Cerro Zunil, Las Mercedes, Capetillo, Dueñas (*Champion*).

Fourteen specimens from the Pacific slope of Guatemala, scarcely varying in colour, and two others, treated as a dark variety, from Motzorongo in Vera Cruz. A comparatively large, posteriorly widened form, with the elytra very broadly rufescent at the sides and the punctures of the outer series rather fine and somewhat scattered.

10. *Pseudopentarthrum atrum*, sp. n.

Elongate, conico-cylindric, shining, black, the antennæ and tarsi ferruginous. Head sparsely punctate, transversely depressed and feebly foveate between the eyes; rostrum very short, stout, closely punctate. Prothorax broader than long, suboval, constricted in front, closely, coarsely punctate. Elytra very gradually widened or subparallel in their basal half, conjointly rounded and scarcely produced at the apex; coarsely seriate-punctate, the punctures closely placed along shallow striæ, the interstices rather broad, feebly convex, and conspicuously uniseriate-punctate.

Length $2\frac{2}{3}$ – $3\frac{1}{3}$, breadth 1 – $1\frac{1}{4}$ millim.

Hab. MEXICO, Paso del Macho, Cordova, Jalapa (*Höge*); BRITISH HONDURAS (*Blanca-neaux*); GUATEMALA, San Gerónimo (*Champion*).

Nine specimens. Perhaps a dark form of *P. limbatum*, with the prothorax and elytra more coarsely punctured. The two examples from San Gerónimo are taken as the types.

11. *Pseudopentarthrum depressifrons*, sp. n. (Tab. I. fig. 19.)

Elongate, subcylindrical, shining, black or nigro-piceous, the tarsi and antennæ ferruginous. Head sparsely punctate, broadly, transversely depressed, and more or less distinctly foveate between the eyes; rostrum curved, short and stout, closely punctate. Prothorax nearly as long as broad, convex, suboval, distinctly constricted before the apex, closely punctate. Elytra long, wider than the prothorax, subparallel in their basal half, the apices somewhat produced, conjointly rounded, and narrowly margined; rather coarsely seriate-punctate, the punctures placed in shallow striæ, the interstices feebly convex, obsolete and irregularly uniseriate-punctate. Beneath closely punctate; first ventral segment broadly depressed down the middle in the ♂.

Length $2\frac{1}{6}$ – $2\frac{2}{3}$, breadth $\frac{4}{5}$ – $\frac{9}{10}$ millim. (♂ ♀.)

Hab. GUATEMALA, Guatemala city, Capetillo, Zapote (*Champion*).

Numerous examples. A small form closely related to *P. phlæophagoides*, with a

slightly longer rostrum and the head broadly depressed between the eyes. The punctures on the elytra vary in size and depth, and the prothorax in one of the Zapote specimens is arcuately dilated at the sides.

12. *Pseudopentarthrum foveifrons*, sp. n.

Moderately elongate, conico-cylindric, shining, black, the apical joint of the tarsi ferruginous. Head closely punctate, transversely depressed and foveate between the eyes, the latter somewhat prominent; rostrum short, stout, closely, finely punctate. Prothorax suboval, about as long as broad, narrowed and feebly constricted in front, very closely, somewhat finely punctate. Elytra convex, moderately long, broader than the prothorax, gradually widening to the middle, with rows of rather coarse punctures placed along shallow striae, the sutural stria more deeply impressed, the interstices feebly convex and obsoletely uniseriate-punctate, the humeri prominent. Beneath closely punctate.

Length $2\frac{1}{4}$ – $2\frac{1}{2}$, breadth $\frac{9}{10}$ –1 millim.

Hab. GUATEMALA, Chacoj and San Juan in Alta Vera Paz (*Champion*), Trece Aguas (*Schwarz and Barber, in U.S. Nat. Mus.*).

Eight specimens, the one from San Juan having the prothorax arcuately dilated at the sides, a similar difference being observable in one of the Zapote examples of *P. depressifrons*. This is the Atlantic representative of that species, differing from it in the more convex, shorter, less parallel elytra, and the darker tarsi and antennae. The interocular portion of the head is strongly depressed and foveate.

13. *Pseudopentarthrum tenue*, sp. n.

Elongate, narrow, subcylindrical, shining, black, the antennae, tibiae, and tarsi ferruginous. Head sparsely punctate, transversely depressed and foveate between the eyes; rostrum very short, stout, constricted at the base, the anterior portion transversely quadrate, closely, finely punctate; eyes slightly prominent. Prothorax a little longer than broad, oval, distinctly constricted in front, closely punctate. Elytra elongate, wider than the prothorax, parallel to beyond their basal half, produced and conjointly rounded at the apex; rather coarsely seriate-punctate, the punctures placed in shallow striae, the interstices feebly convex and obsoletely uniseriate-punctate. Beneath very sparsely punctate; first ventral segment depressed at the middle.

Length $2\frac{1}{4}$, breadth $\frac{3}{4}$ millim. (♂.)

Hab. GUATEMALA, Dueñas (*Champion*).

One specimen, found in the vicinity of the Volcan de Fuego. A very narrow, elongate form, with the widened apical portion of the rostrum transversely quadrate, the prothorax as long as broad, and the elytra produced at the apex. It is nearly related to *P. depressifrons*. Mr. Wickham has sent me a very similar unnamed form from Brownsville, Texas.

MICROPENTARTHURUM, gen. nov.

Rostrum very short and stout, somewhat constricted at the base, feebly curved, the apical portion parallel-sided, the scrobes subangulate, extending backwards for a short distance towards the eyes and then abruptly descending, the antennae inserted at about the middle; eyes small, rounded, rather prominent, inserted just in front of the globose portion of the head, the space between them transversely depressed;

antennæ with a 5-jointed funiculus, the club ovate, small; prothorax oblong, convex; scutellum not visible; elytra oblong, oval, convex, the humeri almost obliterated; metathoracic episterna covered by the inflexed margin of the elytra; anterior coxæ subcontiguous; legs short; body conico-cylindric, glabrous, metallic.

Type, *M. æneum*.

This genus is nearly related to *Pseudopentarthrum*, Woll., and *Pentarthrinus*, Casey, and the type is probably apterous, the scutellum not being visible and the humeri almost obliterated. *Micropentarthrum* belongs to Wollaston's section "bbb" of the "Pentarthrides," the other two genera to his section "bb."

1. *Micropentarthrum æneum*, sp. n. (Tab. I. figg. 20, 20 a.)

Moderately elongate, shining, æneous, the antennæ in part, and the tibiæ and tarsi, ferruginous, the antennal club and femora piceous. Head very sparsely, minutely punctate, transversely depressed and foveate between the eyes; rostrum closely, finely punctate. Prothorax as long as broad, somewhat oval, very feebly constricted in front; closely, finely punctate. Elytra moderately long, rounded at the sides, at the middle very much wider than the prothorax, and obliquely narrowed at the tip; with rows of rather coarse scattered punctures placed along faintly impressed striæ, the sixth abbreviated anteriorly, the interstices almost smooth. Beneath sparsely punctate, the ventral segments with a few widely scattered minute punctures, the first unimpressed.

Length $2\frac{1}{10}$, breadth $\frac{5}{8}$ millim. (♀?)

Hab. GUATEMALA, San Gerónimo (*Champion*).

One specimen. This is the only metallic Central-American Cossonid known to me.

NYSSONOTUS.

Nyssonotus, Casey, Ann. N. York Acad. Sci. vi. p. 701 (1892).

The single species of this genus may be known by its dense, coarse sculpture, and the abundant, short, suberect setosity of the surface. The funiculus is 5-jointed; the rostrum is rather long, stout, and parallel-sided, and not abruptly separated from the head; the eyes are rather large and depressed; the prothorax is much narrower than the elytra; the elytra are truncate at the base, comparatively broad, parallel, and rugosely punctured.

1. *Nyssonotus seriatus*. (Tab. I. fig. 21.)

Nyssonotus seriatus, Casey, Ann. N. York Acad. Sci. vi. p. 701¹.

Hab. NORTH AMERICA, El Paso¹ and Marfa in Texas, San Jacinto in California.—MEXICO, Toxpam, Jacale (*Sallé*), Xucumanatlan in Guerrero (*H. H. Smith*).

Five specimens, the one from Jacale agreeing very nearly with (though narrower than) the four from Texas and California before me, the others from Mexico more elongate, and with the elytral interstices more densely and sub-biseriately punctate towards the suture.

Sect. PSEUDAPOTREPIDES.

The single genus placed in this section has a 6-jointed funiculus, but it cannot be included in the "Onycholipides" of Wollaston. *Pseudapotrepus* forms, as it were, a connecting-link with the Acamptina, the prosternum being angularly emarginate at the apex and the rostrum deflexed.

PSEUDAPOTREPUS, gen. nov.

Rostrum stout, short, parallel-sided, deflexed in repose, abruptly separated from the large head, the scrobes obliquely descending to the eyes; antennæ inserted at the middle of the rostrum, the funiculus 6-jointed—1 stout, as long as 2-4 united, 3-6 closely articulated, strongly transverso, and widening outwards,—the club ovate, abrupt, rather large, with the basal joint shining and as long as the rest united; eyes lateral, placed on the convex portion of the head, coarsely faceted, coalescent beneath; prothorax somewhat oval; scutellum small; elytra much wider than the prothorax, gradually narrowing from the base, produced at the apex; prosternum unimpressed down the middle, margined and deeply, angularly excised at the apex; metasternum short; anterior coxæ narrowly, the others widely, separated; legs short; femora and tibiæ stout, the tibiæ strongly unguiculate; tarsi slender, the third joint very little wider than the second, the claws minute, free; body oblong-ovate, coarsely sculptured and setose.

Type, *P. macrophthalmus*.

The type of this genus has somewhat the facies of the N.-American *Apotrepus*, Casey, except that it is very much smaller. The short, 6-jointed funiculus, the inferiorly coalescent, coarsely faceted eyes, which are placed on the convex portion of the head (as in *Micromimus*), and the angularly emarginate apex of the prosternum (allowing a considerable deflexity of the rostrum in repose) are its chief characters. No other Cossonid has been described, so far as I am aware, with the eyes coalescent beneath, though they are subcontiguous in *Tetratemnus*.

1. *Pseudapotrepus macrophthalmus*, sp. n. (Tab. I. figg. 22, 22 a-c.)

Moderately shining, piceous, the antennæ, rostrum, legs, and elytra more or less ferruginous; sparsely clothed with coarse, semierect, blunt, ochreous setæ, those on the elytra arranged in a single row along each interstice. Head and rostrum densely, coarsely punctate, the head shallowly transversely grooved between the eyes, the rostrum slightly curved and about as long as the posterior portion of the prothorax. Prothorax nearly as long as broad, feebly rounded at the sides, gradually narrowing forwards, strongly constricted in front, coarsely, densely punctate. Elytra moderately long, somewhat triangular, with rows of closely placed, coarse, subquadrate punctures, separated by very narrow, slightly raised, sparsely uniseriate-punctate interstices, the outer striæ entire. Beneath closely, coarsely punctate.

Length 2, breadth $\frac{5}{8}$ millim.

Hab. GUATEMALA, near the city (*Champion*).

One specimen.

Sect. COSSONIDES.

Cossonides, Wollaston (part.).

Cossonini, Leconte (part.).

Under this section are placed most of the genera with a 7-jointed funiculus included in the *Cossonides* by Wollaston, less *Tomolips* and the other forms related to *Rhyncolus*; these latter have the rostrum not so abruptly separated from the comparatively broader head, and uninterruptedly continuous with the frons, and the anterior coxæ usually subcontiguous †.

Homaloxenus, Woll. (= *Nanus*, Schönh.), is here excluded from the *Cossonina*, and it has already been dealt with under the *Trypetina* (*anteà*, p. 5).

HEPTARTHURUM, gen. nov.

Head globose, almost smooth; rostrum stout, curved, short, subcylindrical, abruptly separated from the head, the eyes small, lateral, strongly transverse, and placed at its base, the scrobes obliquely descending; antennæ inserted at or just beyond the middle of the rostrum, the funiculus 7-jointed, slender, the club abrupt, stout, short-ovate, with the basal joint more sparsely pilose than the rest; prothorax long, oval or subconical, feebly constricted in front, subtruncate at the base; scutellum invisible or extremely minute; elytra less than twice the length of the prothorax, subtruncate at the base, produced at the apex, coarsely and closely seriate-punctate, the outer rows of punctures becoming coalescent anteriorly; anterior coxæ separated by at most their own width; metasternum rather short, the episterna almost covered by the inflexed margin of the elytra; ventral segments 3 and 4 very short, the sutures deep; legs short; tibiæ with a long claw at the outer apical angle, the anterior pair feebly sinuate within; tarsi slender, joint 3 simple, the claws minute, slender, free; body oblong-ovate, glabrous.

Type, *H. gibbipenne*.

This genus belongs to Wollaston's section "g" of his group *Cossonides*. The three species referred to it,—two from the highest part of the Guatemalan Cordillera and one from Mexico,—have the eyes placed, as it were, at the base of the rostrum, owing to the abrupt separation of the latter from the globose head, the prothorax longer than broad, and the scutellum extremely minute or invisible. No external sexual marks of distinction are apparent in any of them. The relatively shorter elytra and metasternum, the almost or quite obsolete scutellum, and the very coarsely and closely seriate-punctate elytra separate *Heptarthrum* from *Stenomimus*.

* *Scutellum not visible.*

1. *Heptarthrum gibbipenne*, sp. n. (Tab. I. figg. 23, 23 a.)

Rather convex, oblong-ovate, widening posteriorly, feebly shining above, black or piceous, the antennæ and tarsi ferruginous. Rostrum sparsely punctate, slightly constricted towards the base, the apical portion parallel-sided; the antennæ inserted at the middle. Prothorax long, subconical, feebly rounded at the sides, densely, coarsely punctate, with an indication of a smooth, abbreviated, median line. Scutellum

† The N.-American species incorrectly referred by Leconte to *Macrorhyncolus*, Woll. (*Rhyncolus protractus*, Horn), and *Macrancylus*, Lec., seem to me to be better placed under the *Rhyncolides* than among the true *Cossonides*.

not visible. Elytra broader than the prothorax, widened to the middle and rapidly narrowed thence to the apex, transversely gibbous before the abrupt apical declivity, the humeri angular; with rows of closely packed, extremely coarse, subtransverse punctures, the interstices very narrow, raised, irregularly uniseriate-punctate. Beneath coarsely punctate. Anterior coxæ separated by a little less than their own width.

Length $2\frac{1}{8}$ – $2\frac{2}{5}$, breadth $\frac{7}{8}$ –1 millim.

Hab. GUATEMALA, Totonicapam 8500–10,500 feet (*Champion*).

Six specimens, probably from beneath pine-bark.

**** *Scutellum visible, minute.***

2. *Heptarthrum costatipenne*, sp. n. (Tab. I. figg. 24, 24 a.)

Moderately convex, oblong, shining, fnsco-castaneous, the legs and antennæ ferruginous. Rostrum finely and somewhat closely punctate, the punctures becoming coarse and crowded at the base, the antennæ inserted at a little beyond the middle. Prothorax longer than broad, subconical, rounded at the sides posteriorly, densely, coarsely punctate. Scutellum minute, transverse. Elytra slightly wider than the prothorax, oblong-oval, the humeri distinct; with rows of closely packed, coarse, subtransverse punctures, the interstices very narrow, raised, and obsoletely uniseriate-punctate.

Length $2\frac{1}{10}$, breadth $\frac{4}{5}$ millim. (σ ?)

Hab. MEXICO, Toxpam (*Sallé*).

One specimen. Smaller, narrower, and more shining than *H. gibbipenne*, the rostrum rugosely punctate at the base, the short scutellum just visible, the elytra not widened posteriorly.

3. *Heptarthrum cordilleræ*, sp. n. (Tab. I. fig. 25.)

Oblong-ovate, narrow, shining, black, the antennæ, tarsi, base of the femora, and coxæ ferruginous. Rostrum very sparsely, finely punctate, the punctures becoming coarser and closer towards the base, the antennæ inserted at the middle. Prothorax long, gradually narrowing from near the base, constricted in front; closely, coarsely punctate, with indications of a smooth median line. Scutellum just visible. Elytra scarcely wider than the prothorax, attenuate at the apex, the humeri distinct; with rows of coarse, closely placed, subtransverse punctures, the interstices very narrow, feebly raised, and faintly uniseriate-punctate. Beneath coarsely punctate. Anterior coxæ separated by nearly their own width.

Length $1\frac{3}{5}$ –2, breadth $\frac{1}{2}$ – $\frac{3}{5}$ millim.

Hab. GUATEMALA, Totonicapam 8500–10,500 feet (*Champion*).

Six specimens, found with *H. gibbipenne*. Smaller, narrower, and more shining than *H. costatipenne*, the elytra subparallel at the base and with the interstices less raised, &c.

HIMATIUM.

Himatium, Wollaston, Trans. Ent. Soc. Lond. 1873, pp. 436, 461, 542, 607; Leconte and Horn, Proc. Am. Phil. Soc. xv. p. 426 (1876); Casey, Ann. N. York Acad. Sci. vi. p. 690.

The type of this genus is *H. pubescens*, Woll., from Malabar, and three others from N. America and one from S. Africa have since been recorded, one at least of these

latter, *H. errans*, Lec., being closely related to the Indian insect. The funiculus is distinctly 7-jointed in *H. pubescens*, but in the American forms known to me the second joint is very short and difficult to detect.

1. *Himatium rugicolle*, sp. n. (Tab. I. fig. 26.)

Elongate, narrow, depressed, subopaque, ferruginous; thickly clothed with rather coarse, semierect, curled, blunt, ochreous setæ, those on the elytra uniseriately arranged down each interstee. Head between the eyes, and the rostrum also, densely, rugulosely punctate. Prothorax longer than broad, gradually narrowing forwards, feebly constricted in front, narrower than the elytra; densely, shallowly, confluent punctate, a smoother bare space in the centre at the apex excepted. Elytra moderately long, with rows of oblong, coarse punctures, separated by flat, rugulose interstices, which are of about the same width as the punctures. Legs short and stout.

Length 2, breadth $\frac{2}{3}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

One specimen. Extremely like the N.-American *H. errans*, Lec. (examples of which, and of *H. conicum*, Lec., have been sent me by Mr. Barber), but smaller, the prothorax considerably narrower than the elytra and not so coarsely punctured, the elytra with the seriate punctures more scattered and the interstices quite flat.

CATOLETHRUS.

Catolethrus, Schönherr, Gen. Curc. iv. p. 1077 (1838); viii. 2, p. 285; Wollaston, Trans. Ent. Soc. Lond. 1873, pp. 437, 474, 557, 617.

♂. *Phacegaster*, Wollaston, loc. cit. pp. 437, 476, 559.

This is one of the most easily recognized Cossonid genera inhabiting Tropical America, all the species* having the inner dorsal striæ of the elytra deeply impressed and divergent on the apical declivity (fig. 27 *b*)—a form of sculpture suggestive of that of various Scolytidæ. *Phacegaster*, Wollaston, was based upon the male of *Catolethrus nasalis*, Boh., this insect, like *C. fallax*, having the rostrum flattened at the base and much broader than in the same sex of *C. longulus*, the peculiar femoral and ventral characters ascribed to it being present in the type (♂) of the genus *Catolethrus*, *C. longulus*. The female of *Phacegaster nasalis* (= *Catolethrus læviusculus*, Woll.) is a typical *Catolethrus*. The species captured by myself in Central America were found in sappy wood, particularly, I believe, of Musaceous plants. The four forms may be grouped thus:—

Rostrum subcylindrical in both sexes, slender in ♀. [CATOLETHRUS.]

Elytra with the sides indeterminately refescent and the sutural region darker; prothorax sparsely punctured; first ventral segment deeply

excavate and 4-foveate in ♂ *longulus*, Boh.

* The Tahitian and other forms referred to it belong elsewhere.

- Elytra with the sides abruptly rufo-fulvous and the sutural region black;
 prothorax closely punctate *fulvolimbatus*, sp. n.
 Elytra black; first ventral segment almost unimpressed in ♂ *ebeninus*, sp. n.
 Rostrum flattened and much broader in ♂, slender and cylindrical in ♀;
 first ventral segment excavate and 4-foveate in ♂. [PHACEGASTER.] *fallax*, Boh.

1. *Catolethrus longulus*. (Tab. I. figg. 27, 27 a, b, ♂.)

Catolethrus longulus, Boh. in Schönh. Gen. Curc. iv. p. 1078¹; viii. 2, p. 285².

Rhyncolus tenuirostris, Schönh. in litt.³

- ♂. Rostrum stout, moderately curved; femora closely set along their lower edge with short, fulvous, hair-like scales; ventral segments 1 and 2 broadly and deeply excavate down the middle, and each with two very small, transversely placed, rugulose foveæ in the excavation (the foveæ on 1 widely separated, those on 2 subcontiguous and placed near its anterior margin), 5 with a very large, transverse fovea in the middle (fig. 27 a).
 ♀. Rostrum with the anterior portion polished, a little longer, arcuate, and more slender, appearing more abruptly thickened at the base.

Hab. MEXICO^{1 2} (*Truqui*, in *Mus. Brit.*), San Andres Tuxtla, Toxpam, Tabasco (*Sallé*), Las Vigas (*Höge*), San Francisco (*Wickham*), Motzorongo (*Flohr*); GUATEMALA, Trece Aguas (*Barber & Schwarz*, in *U.S. Nat. Mus.*), Cahabon, Chiacam, San Juan, Chacoj, Senahu, Tamahu, and San Gerónimo in Vera Paz, Zapote, Guatemala city, Capetillo, Dueñas (*Champion*); NICARAGUA, Escondido River (*Richmond*, in *U.S. Nat. Mus.*), Chontales (*Janson*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

A common insect in Central America and apparently replaced southward by *C. fallax*. The elytra usually have the sides broadly and indeterminately rufescent, but the entire body is sometimes almost wholly black, or ferruginous with a darker space along the suture. The peculiar ventral and femoral characters of the male have hitherto escaped notice.

2. *Catolethrus fulvolimbatus*, sp. n. (Tab. I. fig. 28, ♀.)

Very elongate, narrow, subfusiform, alutaceous, moderately shining, piceous, the elytra with the sides broadly rufo-fulvous and the sutural region black, the antennæ (the club excepted), tip of the rostrum, and tarsi ferruginous. Head closely, finely punctate, deeply transversely sulcate between the eyes; rostrum comparatively slender, cylindrical, widened towards the base and apex, somewhat closely punctate; antennæ with a rather slender funiculus and a moderately stout club. Prothorax oblong-oval, much longer than broad, strongly constricted in front; closely, somewhat coarsely punctate, with an abbreviated impunctate median line. Scutellum strongly transverse, smooth. Elytra scarcely wider than the prothorax, gradually narrowing from the base, the apices bluntly and separately rounded; somewhat coarsely seriate-punctate, the punctures placed in faint striæ, the two inner striæ divergent at the apex, the interstices flat, minutely uniseriate-punctate, the second and third raised and convex on the apical declivity, the third and ninth confluent just before the tip. Legs short; femora unarmed; tarsi rather narrow.

Length $4\frac{7}{8}$, breadth 1 millim. (♀.)

Hab. PANAMA, Bugaba (*Champion*).

One female, differing from specimens of the same size and sex of *C. longulus* in the longer and more slender rostrum, the closely and strongly punctured prothorax, the

broader scutellum, and the rufo-fulvous elytra, with a broad sharply-defined black sutural stripe. From the Venezuelan *C. interstitialis*, Faust, the type (♀) of which I have seen, the present species may be known by its narrower less depressed form, the smooth median line on the prothorax, the less elongate elytra, the darker legs, &c.

3. *Catolethrus ebeninus*, sp. n. (Tab. I. fig. 29, ♂.)

Elongate, shining, black, the antennæ at the base or entirely, and sometimes the tarsi also, ferruginous. Head with a few minute scattered punctures, transversely grooved between the eyes; rostrum (♂) stout, subcylindrical, feebly curved, distinctly widened at the apex and behind the middle, sparsely, finely punctate, (♀) shorter, arcuate, much more slender, and almost smooth. Prothorax (♂) longer than broad, suboval, about equally narrowed in front and behind, abruptly constricted and tubulate at the apex, sparsely, finely punctate, except along a narrow space down the middle, (♀) less elongate and not so abruptly constricted in front. Scutellum small, transverse. Elytra very little wider than the prothorax, gradually narrowing from the base, the apices each rather broadly and bluntly rounded; finely seriate-punctate, the punctures placed in fine shallow striæ, the two inner striæ divergent at the apex, the interstices flat, minutely uniseriate-punctate, the first (sutural) and third raised and convex on the apical declivity, the third and ninth confluent just before the tip. Beneath sparsely, somewhat coarsely punctate, the first ventral segment very slightly depressed down the middle in the ♂. Legs short and stout, the femora so abruptly excavate near the tip as to appear subdentate, glabrous in the ♂; tibiæ sinuate within in both sexes.

Length $3\frac{1}{2}$ – $4\frac{1}{3}$, breadth 1 – $1\frac{1}{8}$ millim. (♂ ♀.)

Hab. MEXICO, Motzorongo in Vera Cruz (*Flohr*: ♀); BRITISH HONDURAS, Belize (*Blancaneaux*: ♂).

Two males and one female. A smaller, less elongate female (length 3 mm.) from Las Vigas, Mexico (*Höge*), piceous in colour, with more slender antennæ and more deeply punctate-striate elytra, doubtless belongs to the same species. This insect is relatively less elongate and distinctly broader than *C. longulus*, the rostrum is shorter, the prothorax is more rounded at the sides, the legs are shorter and stouter, the elytra are uniformly coloured, and the abdomen is neither foveate nor excavate in the male. *C. basalis*, Woll., is another allied form.

4. *Catolethrus fallax*. (Tab. I. figg. 30, 30 a, ♂.)

Catolethrus fallax, Boh. in Schönh. Gen. Curc. viii. 2, p. 285 (♂)¹.

♂. Rostrum moderately curved, very stout, broad, slightly widened at the apex and at the basal third, depressed (and sometimes slightly hollowed down the middle) at the base, closely, finely punctate; femora almost glabrous beneath; ventral segments 1. and 2. excavate and bifoveate as in *C. longulus*, the foveæ on 2 sometimes coalescent, ♂ also with a large deep foveiform depression (fig. 30 a).

♀. Rostrum arcuate, much more slender, cylindrical, widened towards the base, very sparsely, finely punctate.

Hab. NICARAGUA, Chontales (*Janson*: ♂ ♀); PANAMA, Bugaba (*Champion*: ♂).—COLOMBIA (*Mus. Brit.*: ♂); VENEZUELA, Caracas¹; BRAZIL, Pará (*coll. Fry*: ♂ ♀); ANTILLES, St. Vincent, Leeward side (*H. H. Smith*: ♂).

Broader and more robust than *C. longulus*, the elytra subtruncate at the apex, the femora more strongly clavate, the posterior pair sometimes armed with a small tooth, the tarsi stouter; the rostrum of the male almost as broad as in the Brazilian *C. nasalis*,

Boh. (the type of Wollaston's genus *Phacegaster*), that of the female relatively shorter, more curved, and very little stouter than in the same sex of *C. longulus*; the intermediate tibiæ of the male more strongly sinuate within. The numerous specimens of *C. fallax* before me vary greatly in size and colour, the female from Chontales having the elytra rufo-testaceous, while the example from St. Vincent is a small poorly-developed male. The male of *C. nasalis* has the posterior tibiæ curved and furnished with a dense fascicle of long fulvous hairs on the inner side near the base, and the depression on the fifth ventral segment carinate down the middle; the female (*C. læviusculus*, Woll.) has a longer and less curved rostrum than the same sex of *C. fallax*.

PSEUDEUCOPTUS, sp. n.

Head strongly exserted, porrect, cylindrical, constricted on each side posteriorly, the eyes transverse, depressed, and distant from the base; rostrum stout, nearly twice as long as the exposed portion of the head, slightly widened at the tip, and with small tuberculiform pterygia, the scrobes extending backward to the eyes, the antennæ inserted at about the middle, the funiculus 7-jointed, the club rather small, acuminate-ovate, abrupt; prothorax elongate, constricted and tubulate in front, truncate at the base, and with the disc very broadly depressed down its entire length; scutellum subtriangular, large, flat; elytra elongate, subparallel, not wider than the prothorax, broadly flattened; coxæ widely separated, the anterior pair especially; prosternum much longer than the moderately elongate metasternum, and with a transverse sulcus between the coxæ; ventral segments 1 and 2 connate, the suture between them almost obliterated; legs short and stout; femora strongly clavate and compressed, slender at the base; tibiæ with a long claw at the outer apical angle, the anterior pair angularly dilated on the inner side at about the middle, the others triangular; tarsi with joints 1-3 equal in length, 3 simple, 4 comparatively stout, barely as long as 2 and 3 united, the claws minute, free; body strongly depressed, very elongate, narrow, almost glabrous.

Type, *P. macrocephalus*.

This genus is perhaps nearest allied to the Tropical-American *Eucoptus*, Woll., but the unique insect referred to it is more like a *Catolethrus*, with the body flattened as in the eastern *Isotrogus*. It is remarkable on account of its long, porrect head, unusually elongate prothorax, short, stout legs, and very depressed body. The type is probably a male, and the female may have a more slender rostrum. *Eucoptus* extends to Cuba, but it is not represented in the Central-American collections before me.

1. *Pseudeucoptus macrocephalus*, sp. n. (Tab. I. fig. 31.)

Moderately shining, black, the antennæ, knees, tibiæ, and tarsi piceous or fusco-ferruginous, the tip of the rostrum and the outer half of the disc of the elytra rufescent. Head very sparsely, minutely punctate, the rostrum closely, subrugosely punctured in its basal half, becoming much smoother at the tip. Prothorax nearly one-half longer than broad, arcuately narrowed anteriorly to the short, narrow, tubulate apical portion; very finely alutaceous and with minute scattered punctures, the depressed disc with a distinct narrow median groove anteriorly, which becomes obsolete towards the base. Elytra less than twice the length of the prothorax, conjointly rounded at the apex; shallowly striate, the striæ feebly punctate, the interstices flat, alutaceous, and obsoletely uniseriate-punctate. Beneath sparsely, finely punctate; first ventral segment almost unimpressed, the fifth transversely depressed posteriorly.

Length $3\frac{1}{2}$ (with rostrum 4), breadth $\frac{3}{4}$ millim. (σ ?)

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

One specimen.

MICROMIMUS.

Micromimus, Wollaston, Trans. Ent. Soc. Lond. 1873, pp. 437, 481, 564, 622.

Three Tropical-American forms were included by Wollaston in *Micromimus*, which is recognizable by the strongly transverse, depressed eyes, the eyes themselves (as in *Lipancylus*, Woll.) being placed at the sides of the large, globose portion of the head immediately behind the short, stout, subcylindrical rostrum. In *M. nigrescens* and some of the new species now added the disc of the prothorax is often more or less depressed along the median line, and apparently more distinctly so in the male than in the female. The tarsal claws are minute and free. The seven members of the genus known to me may be separated thus:—

- a. Eyes coarsely faceted, large, and descending.
 - a¹. Prothorax very feebly subapically constricted; apices of elytra conjointly rounded: body ferruginous *continuus*, sp. n.
 - b¹. Prothorax distinctly subapically constricted.
 - a². Apices of the elytra conjointly rounded.
 - a³. Elytra punctato-sulcate, with narrow costiform interstices: body ferruginous [*batesi*, Woll.]
 - b³. Elytra crenato-striate, with the interstices about as wide as the seriate punctures.
 - a⁴. Body piceous, the elytra rufescent; rostrum longer *minimus*, Boh.
 - b⁴. Body ferruginous; rostrum very short [*pumilio*, Woll.]
 - b². Apices of elytra broader, bluntly, conjointly rounded, very slightly dehiscent at the sutural angle: body piceous *nigrescens*, Woll.
 - c². Apices of elytra separately rounded, dehiscent at the sutural angle: body ferruginous *dehiscens*, sp. n.
 - b. Eyes more finely faceted, smaller, transversely oval; apices of elytra explanate laterally and separately rounded at the tip; body above and beneath coarsely punctured, testaceous *cribrosus*, sp. n.

1. *Micromimus continuus*, sp. n. (Tab. I. figg. 32, 32 a.)

Elongate, subfusiform, narrow, shining, fusco-ferruginous or ferruginous. Head slightly depressed and obsoletely foveate between the eyes, the latter very large and extending downward; rostrum short, stout, subcylindrical, finely punctate. Prothorax a little longer than broad, narrowing from near the base, the subapical constriction almost obsolete on the disc; closely, finely punctate, and with a faint median groove. Elytra distinctly wider than the prothorax, moderately long, the apices produced and somewhat narrowly, conjointly rounded; crenato-striate, the interstices obsoletely uniseriate-punctate. Beneath sparsely, finely punctate; first ventral segment with a shallow transverse impression in the middle at the apex in the ♂.

Length $2\frac{4}{5}$ – $2\frac{9}{10}$, breadth $\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2000–4000 ft. (*Champion*).

Two specimens, assumed to be male and female. Very like *M. dehiscens*, but with the apices of the elytra less explanate and conjointly rounded, the prothorax closely,

finely punctate and with the subapical constriction indistinct, the head less depressed between the eyes, the rostrum cylindrical. Less elongate than *M. batesi*, Woll., from Brazil, the elytral interstices as wide as the striæ, the striæ narrower and not so deeply impressed, the prothorax less constricted in front, &c.

2. **Micromimus minimus.** (Tab. I. figg. 33, 33 a.)

Phlæophagus minimus, Boh. in Schönh. Gen. Curc. iv. p. 1053¹.

Hab. MEXICO, Orizaba (*coll. Chevrolat*¹); BRITISH HONDURAS, Rio Sarstoon (*Blanca-neaux*); GUATEMALA, El Tumbador, Panajachel, Guatemala city (*Champion*); NICARAGUA, Managua (*Solari*); PANAMA, Bugaba (*Champion*).

Dr. Sjöstedt informs me that he is unable to find the type of this species at Stockholm, but there can be little doubt of its identification, the dark head, rostrum, and prothorax and the rufescent elytra being characteristic. Our numerous specimens from Guatemala city, &c., are of about the same size (length 2–2½ mm.) as *M. pumilio*, Woll., from Trinidad, from which they differ in their longer rostrum, the more coarsely and more diffusely punctured prothorax, &c. The prothorax is usually longitudinally impressed and coarsely, irregularly biseriate-punctate down the middle. The elytra are deeply crenate-striate, with the interstices of about the same width as the punctures. The male has the rostrum stouter and more closely punctured than in the female, and the first ventral segment shallowly sulcate. An allied unnamed form from Cayamas, Cuba, in the U.S. Nat. Museum, is labelled as having been found on a Ceiba-tree.

3. **Micromimus nigrescens.** (Tab. I. figg. 34, 34 a.)

Micromimus nigrescens, Woll. Trans. Ent. Soc. Lond. 1873, p. 623¹.

Hab. MEXICO (*Truqui, in coll. Fry*¹); GUATEMALA, Purula in Vera Paz, Cerro Zunil (*Champion*).

Found in numbers at Cerro Zunil, on the Pacific slope. An elongate piceous or fusco-castaneous form, with the prothorax usually longitudinally impressed, and more or less distinctly biseriate-punctate, down the middle. The male has the rostrum stouter and more closely punctate than the female, and the first ventral segment transversely depressed in the centre behind. The large, strongly transverse, coarsely faceted eyes, placed just behind the rostrum at the sides of the globose portion of the head, distinguish *M. nigrescens* from various somewhat similar forms.

4. **Micromimus dehiscens**, sp. n.

Elongate, subfusiform, narrow, shining, fusco-ferruginous or ferruginous. Head almost smooth, transversely grooved and feebly foveate between the eyes, the latter very large, extending downward, and coarsely faceted; rostrum (♂) short and stout, closely punctate, depressed or shallowly sulcate at the base, (♀) a little narrower and smoother, subcylindrical. Prothorax slightly longer than broad, narrowing from near the base, constricted in front, the sides rounded posteriorly; rather coarsely, thickly punctate, and sometimes

with a faint longitudinal median groove. Elytra moderately long, not or very little wider than the prothorax, produced at the apex, the apices subexplanate, separately rounded, and distinctly dehiscent at the sutural angle; crenato-striate, the interstices somewhat convex and obsoletely uniseriate-punctate. Beneath sparsely, finely punctate; first ventral segment with a shallow transverse impression in the middle at the apex in both sexes.

Length $2\frac{1}{4}$ –3, breadth $\frac{2}{3}$ – $\frac{7}{8}$ millim. (♂ ♀.)

Hab. PANAMA, Volcan de Chiriqui 2000–3000 ft. (*Champion*).

Six specimens. Recognizable by its large, downwardly-extended eyes, the separately rounded apices of the elytra, and the ferruginous or fusco-ferruginous colour. In one of the males the rostrum is shallowly grooved down the middle towards the base. The median groove on the prothorax is more pronounced in the male, the disc being completely unimpressed in two of the females obtained. The closely allied *M. batesi*, Woll., has the apices of the elytra conjointly rounded, as in *M. continuus*.

5. *Micromimus cribrus*, sp. n. (Tab. I. figg. 35, 35 a.)

Elongate, subfusiform, somewhat robust, shining, testaceous. Head smooth; eyes strongly transverse, oval, depressed, moderately large; rostrum short, stout, feebly curved, cylindrical, closely, finely punctate. Prothorax as long as broad, subconical, constricted in front, rounded at the sides posteriorly, subtruncate at the base; coarsely, somewhat closely, subuniformly punctate, unimpressed along the median line. Scutellum smooth. Elytra moderately long, scarcely wider than the prothorax, very gradually narrowing from the base, produced at the apex; coarsely crenato-striate, the interstices feebly convex, almost smooth, the seventh and ninth raised and confluent near the tip, together forming a prominent ridge around the apical margin. Beneath coarsely punctured. Legs stout.

Length $3\frac{1}{4}$, breadth 1 millim. (♀.)

Hab. BRITISH HONDURAS, R. Sarstoon (*Blancaneaux*).

One specimen, perhaps a little immature. Separable from the other members of the genus by its more robust build, the coarsely punctured upper and under surfaces, and the prominent marginal ridge at the apex of the elytra. The eyes are relatively smaller, more finely faceted, and less transverse than in *M. nigrescens*.

STENOMIMUS.

Stenomimus, Wollaston, Trans. Ent. Soc. Lond. 1873, pp. 437, 480, 564, 622; Leconte, Proc. Am. Phil. Soc. xv. pp. 337, 339 (1876).

Allomimus, Leconte, loc. cit. xv. pp. 337, 339; Casey, Ann. N. York Acad. Sci. vi. p. 692.

Stenomimus and *Allomimus* were both based upon single species—*S. fryi*, Woll., from Brazil, and *A. (Cossonus) dubius*, Horn, from Illinois,—and one or two N.-American forms have since been added to each of them by various writers. The numerous small species now known from Central America* connect these two genera, the rather less oblique scrobes of *Allomimus dubius* being perhaps due to the very small eyes in that insect. They have the head globose and almost smooth, and slightly depressed or

* Allied unnamed forms occur in the West Indies.

foveate between the eyes; the rostrum cylindrical or subcylindrical, not in the least dilated at the tip; the eyes rather prominent in the typical *Stenomimini*, smaller and more depressed in *Allomimus*, and placed, as it were, at the sides of the rostrum immediately in front of the globose portion of the head; the antennal club abrupt, the funiculus 7-jointed; the prothorax suboval or subconical; the scutellum small, but conspicuous; the elytra deeply punctate-striate or punctato-sulcate, the sutural stria often deeper and broader than the others, the outer interstices narrow and the inner ones not wider than the striæ; the anterior coxæ (except in *S. quichensis*) separated by at least their own width; the tibiæ more or less acute or mucronate at the inner apical angle, the anterior pair sinuate within; and the tarsal claws small. The ventral excavation of the male is usually large, and often extends forward on to the metasternum. *S. verapacis*, *S. rufipes*, &c., approach *Allomimus*; *S. wollastoni*, *S. guatemalensis*, &c., are related to *S. fryi*; *S. rugirostris* has a finely pubescent body, &c., and it may have to be removed eventually and placed near *Carphonotus*. Mr. Barber has kindly forwarded examples of three of the N.-American forms for comparison, and I am therefore enabled to include them in the subjoined Table* :—

- a. Body glabrous or subglabrous; prothorax distinctly narrower than the elytra.
- a¹. Rostrum long or moderately long, comparatively slender, cylindrical (shorter in *S. dirutus*). [STENOMIMUS, Woll.]
- a². Antennæ inserted just behind the middle; rostrum about three-fourths the length of the prothorax; elytra coarsely punctato-sulcate: body nigro-piceous, depressed, elongate *filirostris*, sp. n.
- b². Antennæ inserted at or just beyond the middle; eyes rather prominent.
- a³. Prothorax abruptly constricted and tubulate in front; antennal club rather elongate; elytra much broader than the prothorax, deeply punctato-sulcate; anterior tibiæ (♂) sharply mucronate at the apex within: body black *armatus*, sp. n.
- b³. Prothorax moderately or feebly constricted in front, oval or subconical.
- a⁴. Disc with indications of an irregular double series of coarser punctures towards the base, and also more or less depressed, down the middle.
- a⁵. Elytra coarsely punctato-sulcate *dirutus*, sp. n.
- b⁵. Elytra more finely punctato-sulcate *wollastoni*, sp. n.;
[*fryi*, Woll.].
- b⁴. Disc uniformly punctate and unimpressed *ovaticollis*, sp. n.;
guatemalensis, sp. n.; [*pallidus*, Boh.].

* *Rhyncolus corticalis*, Boh., said by Schwarz to be an *Allomimus* allied to *A. dubius*, is unknown to me. *S. pallidus* (Boh.) was referred by Schönherr to *Phleopagus*.

- b*¹. Rostrum comparatively shorter and stouter; prothorax subconical or suboval, moderately or feebly constricted in front. [ALLOMIMUS, Lec.]
- a*⁶. Anterior coxæ separated by at most their own width; eyes very small and depressed; elytra coarsely punctato-sulcate.
- a*⁷. Prothorax with the punctuation a little more diffuse along the middle of the disc *veræpaxis*, sp. n.;
[*dubius*, Horn].
- b*⁷. Prothorax uniformly punctate *rhyncoloides*, sp. n.;
quichensis, sp. n.; *rufipes*, sp. n.
- b*⁸. Anterior coxæ widely separated; eyes a little more prominent; prothorax uniformly punctate; elytra moderately coarsely punctato-sulcate [*politus*, Casey.]
- b*. Body very finely pubescent; rostrum long and rugose; prothorax and elytra subequal in width, the prothorax long and densely punctate . . . *rugirostris*, sp. n.

1. *Stenomimus filirostris*, sp. n. (Tab. II. fig. 1, ♂.)

Elongate, depressed, shining, nigro-piceous, the rostrum, base of the antennæ, and tips of the tarsi ferruginous. Head depressed between the eyes, the latter small, transverse, and separated above by considerably less than the width of the rostrum; rostrum feebly curved, cylindrical, comparatively slender, about three-fourths the length of the prothorax, sparsely, finely punctate, the punctuation coarser at the base, the antennæ inserted just behind the middle. Prothorax as long as broad, somewhat conical, rounded at the sides posteriorly, the subapical constriction conspicuous on the flanks, scarcely traceable above; densely, rather coarsely punctate, the punctures becoming more diffuse along the middle of the disc. Scutellum smooth. Elytra long, wider than the prothorax, parallel in their basal half, bluntly, conjointly rounded at the tip; coarsely, deeply punctate-striate, the interstices narrow, convex at the apex, and finely uniseriate-punctate. Anterior coxæ separated by their own width. Beneath somewhat coarsely, closely punctate; metasternum flattened down the middle posteriorly, ventral segments 1 and 2 with a shallow median groove. Anterior tibiæ angularly dilated and ciliate at the middle within. Third tarsal joint widened and sub-bilobed.

Length $2\frac{3}{4}$, breadth $\frac{3}{4}$ millim. (♂.)

Hab. GUATEMALA, Purula in Vera Paz (*Champion*).

One specimen, evidently a male, to judge from the ventral excavation. More elongate and less convex than *S. armatus*, the rostrum longer, smoother, and more slender, the antennal club less acuminate, the transverse subapical groove of the prothorax obliterated above, the elytra longer, more coarsely and not so deeply punctate-striate, the tibiæ less acute at the inner apical angle.

2. *Stenomimus armatus*, sp. n. (Tab. II. figg. 2, 2 ♂, ♂.)

Moderately elongate, rather shining, black, the tip of the rostrum and base of the antennæ rufescent, the legs rufo-piceous. Head almost smooth, flattened between the eyes, the latter transverse, oval, and slightly prominent; rostrum moderately stout, curved, rather long, closely punctate, the antennæ inserted just beyond the middle, the club acuminate-ovate. Prothorax a little longer than broad, gradually narrowing from near the base to the strong subapical constriction; densely punctate, except along the narrow, smooth, abbreviated, median line. Elytra considerably wider than the prothorax, parallel at the base, gradually narrowing from about the middle, conjointly rounded at the apex; punctato-sulcate, the sutural stria broader and deeper than the others, the interstices becoming very narrow outwards, convex on the

apical declivity, obsoletely uniseriate-punctate. Anterior coxæ separated by about their own width. Beneath finely, somewhat closely punctate; metasternum broadly flattened down the middle posteriorly and the first ventral segment deeply excavate. Anterior tibiæ sharply, and the others more feebly, toothed at the inner apical angle, the anterior pair angularly dilated and ciliate at the middle within. Third tarsal joint widened and sub-bilobed.

Length $2\frac{1}{2}$, breadth $\frac{1}{2}$ millim. (σ .)

Hab. GUATEMALA, Cerro Zunil, Pacific slope, 4000 feet (*Champion*).

One male. Recognizable by its comparatively long rostrum, the rather long, acuminate antennal club, the densely punctured prothorax, which is strongly constricted in front, the posteriorly narrowed, deeply punctato-sulcate elytra, and the sharply toothed inner apical angle of the anterior tibiæ. The elytra are less abruptly narrowed towards the apex than in most of the allied forms. The rostrum is shorter, stouter, and more distinctly punctured than in *S. filirostris*.

3. *Stenomimus dirutus*, sp. n.

Moderately elongate, narrow, depressed, shining, nigro-piceous, the tip of the rostrum, the shoulders of the elytra, the antennæ, and tarsi ferruginous. Head almost smooth, transversely depressed and feebly foveate between the eyes, the latter transverse and somewhat prominent; rostrum stout, short, curved, sparsely, finely punctate, smoother at the tip, the antennæ inserted just beyond the middle. Prothorax almost as long as broad, obliquely narrowing from near the base to the subapical constriction; closely punctate, except along the narrow depressed median space, in which two irregular rows of coarser punctures are visible posteriorly. Elytra moderately long, subparallel in their basal third, produced at the apex, the apices conjointly rounded and somewhat explanate laterally; coarsely punctato-sulcate, the interstices narrow, convex, and each with a scattered row of very minute punctures. Anterior coxæ separated by about their own width. Beneath rather closely and coarsely punctured; metasternum towards the apex and first ventral segment broadly depressed down the middle. Anterior tibiæ strongly sinuate within.

Length $2\frac{1}{2}$, breadth $\frac{2}{3}$ millim. (σ .)

Hab. GUATEMALA, Cerro Zunil, Pacific slope (*Champion*).

One male. Extremely like *S. verapacis*, but a little more elongate, the rostrum slightly longer, the antennæ inserted nearer the tip, the eyes rather larger, the prothorax depressed down the middle posteriorly and with two rows of coarser punctures in the depression.

4. *Stenomimus wollastoni*, sp. n.

Subfusiform, narrow, shining, varying in colour from black, with the elytra piceous and the tip of the rostrum, the apical half of the abdomen, the antennæ, and legs ferruginous, to entirely testaceous (immature). Head smooth, the eyes rounded and rather prominent; rostrum subcylindrical, comparatively slender, more than half the length of the prothorax, sparsely punctate, the punctures becoming more crowded towards the base, that of the ♀ a little smoother. Prothorax as long as broad, suboval, rapidly narrowing forwards, constricted in front; somewhat thickly punctate, the punctuation more diffuse on the disc, the latter usually with a shallow longitudinal impression. Scutellum smooth. Elytra moderately long, conjointly rounded at the apex, scarcely wider than the prothorax, deeply punctate-striate, the sutural stria broader and deeper than the others, the interstices about as wide as the striae, minutely uniseriate-punctate. Anterior coxæ separated by a little more than their own width. Beneath closely punctate;

first ventral segment broadly excavate down the middle in the ♂, the depression extending for some distance forwards on to the long metasternum. Third tarsal joint a little wider than the second. Length $1\frac{2}{3}$ – $2\frac{1}{6}$, breadth $\frac{1}{2}$ – $\frac{3}{8}$ millim. (♂ ♀.)

Hab. GUATEMALA, Capetillo and Zapote, Pacific slope (*Champion*).

Eleven specimens, three only of which are fully coloured. Near *S. fryi*, Woll., from Brazil, but less depressed, the rostrum longer and smoother, the puncturing of the prothorax and elytral striæ stronger, this last-mentioned character also separating *S. wollastoni* from the N.-American *S. pallidus* (Boh.). The ventral depression of the male is large. The anterior coxæ are widely separated.

5. *Stenomimus ovaticollis*, sp. n.

Elongate, narrow, shining, black or nigro-piceous, the tip of the rostrum, the base of the antennæ, and the tarsi more or less ferruginous. Head almost smooth, the eyes transverse, rounded, and somewhat prominent; rostrum cylindrical, rather slender, curved, about half the length of the prothorax, sparsely, finely punctate. Prothorax about as long as broad, oval, rapidly narrowing from the basal third and constricted in front; closely, finely, uniformly punctate. Elytra a little wider than the prothorax, subparallel in their basal half, conjointly rounded at the apex; deeply punctate-striate, the sutural stria broader and deeper than the others, the interstices narrow, somewhat convex, and finely uniseriate-punctate. Anterior coxæ separated by distinctly more than their own width. Beneath closely, finely punctate; metasternum excavate down the middle posteriorly, the first ventral segment broadly excavate in the centre, and the fifth transversely depressed at the apex, in the ♂. Tibiæ with a minute tooth at the inner apical angle, the anterior pair sinuate within. Tarsi long, the third joint widened, the fourth very slender and as long as the others united.

Length $2\frac{1}{6}$ – $2\frac{2}{5}$, breadth $\frac{3}{8}$ millim. (♂.)

Hab. GUATEMALA, Totonicapam 8500–10,500 feet (*Champion*).

Six specimens, apparently all males, found near the summit of the Cordillera, and doubtless taken under pine-bark. In this insect the prothorax is strongly rounded at the sides posteriorly and rapidly narrowed thence to the subapical constriction. The elytra are more rounded at the sides than in *S. guatemalensis* and the rostrum is longer than in that species.

6. *Stenomimus guatemalensis*, sp. n. (Tab. II. fig. 3.)

Subfusiform, narrow, shining, varying in colour from black, with the antennæ, legs, and tip of the rostrum ferruginous, to entirely rufo-testaceous. Head smooth, the eyes rounded and somewhat prominent; rostrum rather short, stout, closely punctate to the tip. Prothorax slightly longer than broad, somewhat conical, constricted in front; closely, finely, uniformly punctate, and sometimes with a faintly impressed median line towards the base. Elytra barely wider than the prothorax, subparallel in their basal half; deeply punctate-striate, the interstices narrow and finely uniseriate-punctate. Anterior coxæ separated by about their own width. Beneath closely punctate; ventral segments 1 and 2 depressed along the middle in the ♂.

Length $1\frac{5}{8}$ – $2\frac{1}{10}$, breadth $\frac{1}{2}$ – $\frac{3}{8}$ millim. (♂ ♀.)

Hab. GUATEMALA, Capetillo and Zapote, Pacific slope (*Champion*).

Six examples, three of them fully coloured. Closely related to *S. wollastoni*, and occurring at the same localities, differing from it in the shorter, stouter, closely

punctured rostrum, the more finely, uniformly punctured prothorax, the parallel elytra, with more distinctly punctured interstices, and the narrower and shallower ventral depression of the male. More convex than *S. fryi*, the rostrum stouter, &c.; more elongate than *S. pallidus*, the rostrum shorter and much stouter, the sculpture coarser.

7. *Stenomimus veræpaci*s, sp. n.

Moderately elongate, narrow, somewhat depressed, shining, nigro-piceous, the tip of the rostrum, the shoulders of the elytra, the antennæ, and tarsi ferruginous. Head almost smooth, transversely depressed and feebly foveate between the eyes, the latter very small, transverse, and not very prominent; rostrum short, stout, curved, closely, finely punctate at the base, much smoother at the tip, the antennæ inserted at the middle. Prothorax about as long as broad, suboval, constricted in front, closely, rather coarsely punctate, without trace of median groove. Elytra a little wider than the prothorax, moderately long, subparallel in their basal half, produced at the apex, the apices conjointly rounded and somewhat explanate laterally: coarsely punctate-sulcate, the sutural stria deeper than the others, the interstices narrow, convex at the tip, and each with a scattered row of almost obsolete punctures. Anterior coxæ separated by about their own width. Beneath rather closely and coarsely punctured; metasternum towards the apex and first ventral segment broadly depressed down the middle. Anterior tibiæ feebly sinuate within.

Length 2, breadth $\frac{2}{3}$ millim. (σ .)

Hab. GUATEMALA, Balheu in Alta Vera Paz (*Champion*).

One male, probably found under pine-bark. Very like the N.-American *Allomimus dubius* (Horn), the rostrum less curved, closely punctured at the base, the head more distinctly foveate between the eyes, the latter depressed, the sculpture of the prothorax and elytra not so coarse. From the Texan *A. politus*, Casey, it may be separated by the more approximate anterior coxæ, the less densely punctured prothorax, the laterally explanate apices of the elytra, &c.

8. *Stenomimus rhyncoloides*, sp. n. (Tab. II. figg. 4, 4a, σ .)

Moderately elongate, shining, nigro-piceous, the tarsi ferruginous at the tip. Head faintly punctate anteriorly, transversely flattened between the eyes, the latter very small, transverse, not prominent; rostrum feebly curved, very stout, short, about twice as long as broad, closely punctate. Prothorax a little longer than broad, gradually and obliquely narrowing from near the base to the subapical constriction; densely, uniformly punctate, without trace of median groove. Scutellum almost smooth, rather large. Elytra moderately long, slightly wider than the prothorax, parallel in their basal half, produced at the apex, the apical margins slightly explanate laterally; punctate-sulcate, the interstices narrow, convex at the tip, obsoletely uniseriate-punctate. Anterior coxæ separated by distinctly less than their own width. Beneath closely, somewhat coarsely punctate; first ventral segment transversely excavate in the middle posteriorly. Femora stout, the anterior pair dilated and arcuately excavate near the apex above (fig. 4a). Anterior tibiæ very feebly sinuate on their inner edge.

Length 3, breadth 1 millim. (σ .)

Hab. GUATEMALA, Quiché Mts., between 7000–9000 feet (*Champion*).

One male. A robust form, with the general facies of a Rhyncolid, but undoubtedly nearly allied to *Allomimus dubius*. The transverse excavation near the apex of the anterior femora above may be due to some injury.

9. *Stenomimus quichensis*, sp. n.

Moderately elongate, shining, nigro-piceous, the tip of the rostrum, the shoulders of the elytra, the femora, and tibiae reddish, the antennae and tarsi rufo-testaceous. Head almost smooth, transversely depressed between the eyes, the latter very small, transverse, and not prominent; rostrum feebly curved, stout, short, finely punctate. Prothorax as long as broad, suboval, gradually narrowed and slightly constricted in front; closely punctate, without trace of median groove. Scutellum smooth. Elytra a little wider than, and about twice as long as, the prothorax, parallel in their basal half; punctate-sulcate, the interstices narrow, convex at the apex, and obsoletely uniseriate-punctate. Anterior coxae separated by about their own width. Beneath rather finely and closely punctate; first ventral segment shallowly depressed in the middle posteriorly. Anterior tibiae feebly sinuate on their inner edge.

Length $2\frac{1}{2}$, breadth $\frac{7}{8}$ millim. (σ ?)

Hab. GUATEMALA, Quiché Mts., between 7000–9000 feet (*Champion*).

One specimen. This insect is so like *S. rhyncoloides* that at first sight it would appear to be the sexual complement of the same species. It is, however, narrower and less robust, the head is more deeply impressed between the eyes, the rostrum is not so stout, the antennae are entirely rufo-testaceous, the prothorax is more finely and less densely punctate, the anterior coxae are more widely separated, the puncturing of the under surface is finer, and the ventral excavation is shallower.

10. *Stenomimus rufipes*, sp. n.

Moderately elongate, somewhat convex, shining, nigro-piceous, the antennae, legs, and tip of the rostrum ferruginous. Head almost smooth, transversely depressed between the eyes, the latter very small, transverse, and not prominent; rostrum very short and stout, less than twice as long as broad, sparsely, finely punctate. Prothorax as long as broad, somewhat conical, very feebly constricted in front, the sides rounded posteriorly; closely, finely, uniformly punctate, without trace of median groove. Elytra a little wider than, and about twice as long as, the prothorax, parallel in their basal third, conjointly rounded at the apex; punctate-sulcate, the interstices narrow, convex on the apical declivity. Anterior coxae separated by their own width. Beneath somewhat closely punctate; ventral segments 1 and 2 shallowly depressed down the middle.

Length $2\frac{1}{3}$, breadth $\frac{4}{5}$ millim. (σ .)

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

One specimen. A rather robust form approaching the N.-American *Allomimus dubius*, but larger and more elongate, with a shorter, less curved, much stouter rostrum, the prothorax somewhat conical and closely, finely punctate, the elytra more rounded at the apex and with the sulci not so coarsely punctate, the body nigro-piceous, the limbs ferruginous.

11. *Stenomimus rugirostris*, sp. n. (Tab. II. fig. 5.)

Elongate, narrow, rather convex, moderately shining, black, the antennae ferruginous at the base, the legs, and in one specimen (? immature) the elytra also, piceous, very finely pubescent. Head almost smooth, the eyes rounded and rather prominent; rostrum cylindrical, curved, moderately long, rugosely punctate to the tip in the σ , smoother in its outer half and a little more slender in the φ . Prothorax longer than broad, somewhat oval, constricted in front; densely, rather coarsely punctate, the disc sometimes with indications of a shallow median groove. Scutellum very small, smooth. Elytra oblong, subparallel in their basal half, about as wide as the prothorax, conjointly rounded at the tip; deeply punctate-striate,

the sutural stria deeper than the others, the interstices very narrow, somewhat convex, and irregularly uniseriate-punctate. Anterior coxæ separated by about their own width. Beneath closely punctate; first ventral segment broadly and deeply excavate down the middle, and the fifth transversely depressed towards the apex, in the ♂. Tibiæ distinctly mucronate at the inner apical angle. Third tarsal joint rather broad.

Length $2\frac{1}{5}$ – $2\frac{1}{2}$, breadth $\frac{3}{5}$ – $\frac{2}{3}$ millim. (♂ ♀.)

Hab. GUATEMALA, Volcan de Agua 8500–10,500 feet (*Champion*).

Two pairs. Differs from the other species referred to *Stenomimus* in its rather convex, finely pubescent body, rugose rostrum, densely punctured, long, suboval prothorax (which in one male is wider than the elytra), and relatively narrow elytra. The ventral excavation of the male is broad and deep.

TYTTHOMIMUS, gen. nov.

Eyes placed just in front of the globose portion of the head, moderately large, rounded, not prominent, somewhat approximate above; rostrum cylindrical, feebly arcuate, the antennæ inserted at or just beyond the middle, with an ovate, abrupt club, the scrobes obliquely descending; head transversely depressed or foveate between the eyes; prothorax suboval, not so long as broad, feebly constricted at the sides in front; scutellum small; elytra with narrow punctured striæ separated by broader interstices, obtusely produced at the apex; anterior coxæ separated by considerably less than their own width; third tarsal joint a little wider than the second, simple; body narrow, oblong, almost glabrous.

Type, *T. rubicundus*.

The three small species included under this genus are nearly related to *Stenomimus*, but they seem to be best separated from it. They are all of a ferruginous or rufo-testaceous colour, and have a cylindrical rostrum, subapproximate, moderately large, not very prominent eyes, narrowly punctate-striate elytra, and not very widely separated anterior coxæ. The ventral excavation of the male of *T. rubicundus* is peculiarly shaped. *Tytthomimus* differs from *Micromimus* in the position of the eyes; from *Caulophilus* in the more slender limbs, &c.; and from the various forms here referred to *Rhyncolus* in having the rostrum more distinctly separated from the head.

1. *Tytthomimus rubicundus*, sp. n. (Tab. II. fig. 6, ♂.)

Oblong-ovate, narrow, rather convex, shining, ferruginous. Head smooth, shallowly transversely grooved and narrowly foveate between the eyes, the latter large; rostrum short and stout, feebly curved, sparsely, very finely punctate, smooth along the median line. Prothorax a little broader than long, somewhat oval, feebly constricted in front; closely, finely punctate, except along a rather narrow smooth space on the middle of the disc. Scutellum conspicuous, smooth. Elytra moderately long, slightly wider than the prothorax, subparallel to near the middle, the apices broadly produced, somewhat explanate, and each bluntly and separately rounded at the tip; punctate-striate, the interstices broader than the striæ. flat on the disc, convex at the apex, the ninth subcostate from about the basal third, each finely uniseriate-punctate. Beneath sparsely punctate; first ventral segment with a broad, deep excavation, in the centre of which posteriorly is a transverse tuberculiform prominence, the fifth segment shallowly foveate; first ventral suture strongly sinuate. Tibiæ with a minute tooth at the inner apical angle, the anterior pair sinuate within.

Length $2\frac{2}{5}$, breadth $\frac{7}{8}$ millim. (♂.)

Hab. GUATEMALA, El Tumbador 3500 feet, Pacific slope (*Champion*).

One male. More shining than its allies, the prothorax with a broader smooth space on the middle of the disc, the ventral excavation (σ) deep and with a transverse prominence in the centre behind, thus appearing arcuate in shape.

2. *Tytthomimus rufotestaceus*, sp. n.

Oblong-ovate, narrow, moderately shining, faintly alutaceous, ferruginous or rufo-testaceous. Head almost smooth, transversely depressed and sometimes foveate between the eyes, the latter moderately large and separated by less than their own width; rostrum short, stout, feebly curved, parallel-sided in its outer half, sparsely, very finely punctate, the antennæ inserted at the middle. Prothorax not quite so long as broad, suboval, the subapical constriction indistinct, obliterated above; closely, finely punctate, with an abbreviated smooth median line at the base. Scutellum almost smooth, conspicuous. Elytra moderately long, a little wider than the prothorax, subparallel in their basal half, broadly produced at the apex, the apices somewhat explanate and bluntly, separately rounded; narrowly punctate-striate, the interstices broader than the striæ, convex at the apex, finely uniseriate-punctate. Beneath sparsely, finely punctate; first ventral segment broadly depressed down the middle anteriorly in the σ . Tibiæ feebly mucronate at the inner apical angle, the anterior pair sinuate within.

Length $2-2\frac{1}{10}$, breadth $\frac{2}{3}-\frac{3}{4}$ millim. (σ ♀.)

Hab. GUATEMALA, Trece Aguas in Alta Vera Paz (*Barber & Schwarz, in U.S. Nat. Mus.*: σ), Las Mercedes, Pantaleon (*Champion*: ♀).

One specimen from each locality. Smaller and duller than *T. rubicundus*; the impunctate space on the disc of the prothorax reduced to a narrow line at the base, the subapical constriction almost wanting; the ventral depression of the male shallow and not extending to the apex. The relatively longer elytra, the smaller prothorax, the longer and more slender legs, &c., separate *T. rufotestaceus* from *Caulophilus sericatus*.

3. *Tytthomimus lineatocollis*, sp. n.

Moderately elongate, narrow, somewhat depressed, obscure ferruginous, finely alutaceous, feebly shining. Head closely, finely punctate on the vertex, foveate and slightly depressed between the eyes, the latter large and separated by a little more than half the width of the rostrum; rostrum cylindrical, rather slender, about as long as the posterior portion of the prothorax, sparsely, finely punctate, the antennæ inserted at the middle. Prothorax nearly as long as broad, somewhat oval, abruptly constricted in front; closely, finely punctate, except along the smooth median line, which extends from the base to the subapical constriction. Scutellum small. Elytra moderately long, slightly wider than the prothorax, subparallel to beyond the middle, obtusely produced and subexplanate at the apex; narrowly punctate-striate, the interstices much broader than the striæ, flat, transversely rugulose, and closely, conspicuously uniseriate-punctate. Beneath closely, finely punctate; first ventral segment narrowly depressed down the middle. Tibiæ each with a minute tooth at the inner apical angle, the anterior pair angularly dilated at the middle within.

Length $2\frac{1}{4}$, breadth $\frac{2}{3}$ millim. (σ .)

Hab. PANAMA, Bugaba (*Champion*).

One specimen. More elongate and more depressed than the two other species referred to this genus, the head punctate on the vertex, the rostrum longer and not so stout, the prothorax with an almost complete impunctate median line, the elytral interstices transversely rugulose and conspicuously uniseriate-punctate.

CARPHONOTUS.

Carphonotus, Casey, Ann. N. York Acad. Sci. vi. p. 694 (1892).

This genus is based upon a single N.-American species, *C. testaceus*, Casey, and one from the Guatemalan Cordillera is now provisionally added. It is recognizable by its ochreo-pilose body, narrow prothorax, short, subcylindrical rostrum, and transverse, rather prominent eyes, which are placed immediately in front of the globose portion of the head. It approaches *Stenomimus*, Woll.

1. *Carphonotus ochreipilis*, sp. n. (Tab. II. fig. 7.)

Elongate, narrow, somewhat fusiform, shining, ferruginous or obscure ferruginous, thickly clothed with rather long, decumbent, ochreous hairs. Head feebly punctate behind the eyes, the latter moderately prominent and separated above by a little less than their own width; rostrum short, stout, subcylindrical, closely punctate; antennal club stout, acuminate, its basal joint shining. Prothorax as long as broad, subconical, gradually narrowing to the subapical constriction, densely punctate. Elytra much wider than the prothorax, moderately elongate, subparallel in their basal half, conjointly rounded at the apex, the apical margin somewhat dilated laterally; coarsely, deeply punctate-striate, the outer striae entire, the interstices narrow, feebly convex, transversely rugose, and closely uniseriate-punctate. Anterior coxae separated by a little less than their own width. Beneath closely, rather coarsely punctate; metasternum and first ventral segment depressed down the middle in the ♂. Femora clavate. Third tarsal joint slightly widened.

Length $2\frac{1}{2}$ – $2\frac{5}{8}$, breadth $\frac{5}{8}$ –1 millim. (♂ ♀.)

Hab. GUATEMALA, Quiché Mts. and Totonicapam, 7000–10,500 feet (*Champion*).

Three specimens. Differs from the *C. testaceus* in its more approximate eyes, the larger antennal club, the densely punctured, subconical prothorax, the deeply punctate-striate elytra, the more widely separated anterior coxae, the almost simple third tarsal joint, and the closer vestiture.

CAULOPHILUS.

Caulophilus, Wollaston, Ins. Mader. p. 315 (1854); Trans. Ent. Soc. Lond. new ser. v. p. 368 (1861), and 1873, pp. 439, 499, 586; Leconte, Proc. Am. Phil. Soc. xv. pp. 337, 340 (1876).

The type of this genus was from Madeira, but the insect proved to be an introduced American insect (as suspected by Leconte), which extends from the Southern States into Mexico and Guatemala, whence three other species are now added. The larger forms bear a superficial resemblance to the Palaearctic *Rhyncolus lignarius*, Marsh. (*cylindrirostris*, Oliv.). Wollaston in his first description stated that the wings were obsolete, but this must have been an error of observation. The four species may be tabulated thus:—

Elytra more than twice the length of the prothorax: species larger (length over 3 mm.).

Elytral interstices simply convex at the apex, closely punctate *latinasus*, Say.

Elytral interstices strongly costate at the apex, sparsely punctate *costatus*, sp. n.

Elytra shorter, not more than twice the length of the prothorax: species smaller (length not more than $2\frac{1}{4}$ mm.).

Body somewhat convex, nigro-piceous; prothorax relatively narrower . . . *veræcrucis*, sp. n.

Body somewhat depressed, ferruginous; prothorax ample *sericatus*, sp. n.

1. *Caulophilus latinasus*. (Tab. II. fig. 8.)

Rhyncholus latinasus, Say, Descr. N. Am. Curc. p. 30 (1831)¹; Complete Writings, i. p. 299² (nec Boheman).

Caulophilus latinasus, Lec. Proc. Am. Phil. Soc. xv. p. 340 (1876)³; Champ. Ent. Monthly Mag. xlv. p. 121⁴.

Caulophilus sculpturatus, Woll. Ins. Mader. p. 315, t. 6. figg. 4-4 a-c (1851)⁵.

Cossonus pinguis, Horn, Proc. Am. Phil. Soc. xiii. p. 412 (1873)⁶.

Cossonus picipennis, Sturm, in litt.⁷.

Hab. NORTH AMERICA, Georgia^{4 6}, Florida^{1 2 4 6}, Southern States³.—MEXICO (*Sallé*, *ex coll. Sturm*⁶; *Mus. Brit.*), Toxpan, Vera Cruz (*Sallé*), Amula in Guerrero (*H. H. Smith*); GUATEMALA, Dueñas (*Champion*).—MADEIRA⁵.

Mexican and Guatemalan specimens differ from the Madeiran type and from those from S. Carolina sent me by Mr. Barber in having the body nigro-piceous or black, with the elytra sometimes piceous. In two of the Mexican males the entire upper surface is black, opaque, and very closely punctate (except along the very narrow smooth median line of the prothorax), and the antennæ are very stout. The prothorax is sometimes, but not always, distinctly narrower than the elytra. The first ventral segment is depressed down the middle in the male. A specimen from Toxpan is figured.

2. *Caulophilus costatus*, sp. n. (Tab. II. figg. 9, 9 a.)

Subfusiform, moderately shining, nigro-piceous, the head, antennæ, rostrum, elytra, and legs piceous or rufo-piceous. Head and rostrum very sparsely, finely punctate, the rostrum cylindrical, stout, feebly curved, about half the length of the prothorax, the eyes large, the head transversely depressed and feebly foveate between them, the antennal club stout. Prothorax a little broader than long, somewhat conical, gradually narrowing forwards to the subapical constriction; closely punctate, the narrow interspaces alutaceous, the disc with an incomplete median line. Elytra considerably wider than the prothorax, subparallel in their basal half and rapidly narrowing thence to the apex; punctato-sulcate, the interstices convex, costate at the apex (fig. 9 a), somewhat rugulose, each with an irregular row of scattered minute punctures. Legs stout.

Length $3\frac{1}{10}$, breadth $1\frac{1}{10}$ millim. (♀.)

Hab. MEXICO, Motzorongo in Vera Cruz (*Flohr*).

One specimen. Nearly related to *C. latinasus*, differing from it in the smoother rostrum, the somewhat conical prothorax (due to the sides being less rounded), and the convex, apically costate, smoother elytral interstices.

3. *Caulophilus veræcrucis*, sp. n.

Moderately elongate, rather convex, subfusiform, finely alutaceous, rather dull, nigro-piceous, the rostrum, antennæ, humeri, and legs rufo-piceous. Head flattened between the eyes, the exposed portion of the vertex and the rostrum closely punctate, the latter very short, the eyes large. Prothorax slightly broader than long, gradually and arcuately narrowing from near the base to the subapical constriction; very closely, finely punctate, except along the abbreviated smooth median line. Elytra as wide as, but barely twice the length of, the prothorax; shallowly punctato-sulcate, the interstices a little wider than the sulci, almost flat, closely uniseriate-punctate. Anterior coxæ separated by about their own width. Beneath shining, finely, closely punctate; metasternum and first ventral segment depressed along the middle. Legs short and stout.

Length $2-2\frac{1}{4}$, breadth $\frac{3}{4}-\frac{1}{2}$ millim. (♂.)

Hab. MEXICO, Motzorongo in Vera Cruz (*Flohr*).

Two specimens. Much smaller than *C. latinasus*, the elytra less elongate, the prothorax less rounded at the sides, the rostrum shorter. From *C. costatus* the present species may be known by the non-costate apical interstices of the elytra, the smaller size, &c.

4. *Caulophilus sericatus*, sp. n. (Tab. II. fig. 10.)

Moderately elongate, somewhat depressed, sericeous, the elytra duller than the rest of the surface, ferruginous. Head flattened and finely punctate between the eyes, the latter large; rostrum short, sparsely, finely punctate. Prothorax broader than long, rounded-trapezoidal, constricted in front; closely, finely punctate, except along the narrow median line. Elytra scarcely so wide as, and barely twice the length of, the prothorax, subparallel in their basal half; shallowly punctato-sulcate, the interstices almost flat, the inner ones broader than the sulci, and closely uniseriate-punctate. Legs short and stout.

Length $1\frac{5}{8}-2$, breadth $\frac{1}{2}-\frac{3}{5}$ millim.

Hab. GUATEMALA, Pantaleon and Zapote, Pacific slope (*Champion*).

Two specimens. A small form, recognizable by its ample, rounded-trapezoidal prothorax, the rather short elytra, the somewhat sericeous upper surface, and the uniform ferruginous colour.

MEGALOCORYNUS.

Megalocorynus, Wollaston, Trans. Ent. Soc. Lond. 1873, pp. 437, 473, 557, 616.

Cossonus, Stirps 2, Schönherr, Gen. Curc. iv. p. 1039.

The single species of this genus is peculiar to Mexico. It is very like some of the *Cossoni*, but may be readily separated therefrom by the long antennal club and the great dissimilarity in the form of the rostrum in the two sexes.

1. *Megalocorynus depressus*. (Tab. II. figg. 11, 11 a, ♂; 12, ♀.)

Cossonus depressus, Boh. in Schönh. Gen. Curc. iv. p. 1039 (♂)¹.

Megalocorynus depressus, Woll. Trans. Ent. Soc. Lond. 1873, p. 557 (♂ ♀)².

Cossonus conicirostris, Rosensch. in Schönh. Gen. Curc. iv. p. 1040 (♀)³.

Megalocorynus capitatus, Woll. loc. cit. p. 616 (♀)⁴.

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GG

Hab. MEXICO ¹⁻⁴ (*Truqui*), San Andres Tuxtla, Parada (*Sallé*), Jalapa, Oaxaca (*Mus. Brit.*).

I have seen the types of the above forms and they certainly all belong to one variable species: *M. capitatus* has the sides of the prothorax less rounded than usual and *M. conicirostris* is simply a female of *M. depressus*. Specimens occur with the elytra and abdomen ferruginous. The males have the first and second ventral segments very broadly flattened down the middle.

COSSONUS.

Cossonus, Clairville, Ent. Helv. p. 58 (1798); Schönherr, Gen. Curc. iv. p. 994, and viii. 2, p. 266 (part.); Wollaston, Trans. Ent. Soc. Lond. 1873, pp. 438, 483, 568; Leconte, Proc. Am. Phil. Soc. xv. pp. 337, 338 (1876).

Borophlæus, Wollaston, loc. cit. pp. 438, 484, 569.

About 140 members of this widely-distributed genus have been described, including a considerable number from Mexico. Schönherr's first section (Stirps 1, Cent. I.), to which the European type, *C. ferrugineus*, Clairv., belongs, is not represented within our limits, and his Stirps 2, based upon the Mexican *C. depressus*, Boh., has been separated by Wollaston under the name *Megalocorynus*. The pine-bark species (numerous in N. America, Mexico, and Guatemala) nearly all belong to *Borophlæus*, Woll., but they are connected with the typical *Cossoni* by intermediate forms. The tropical eastern representatives are extremely like some of those inhabiting Central and South America and might easily be confounded with them. Many of these insects vary greatly in size, and in some cases there is a considerable variation in the colour of the elytra. They have the rostrum more or less distinctly dilated anteriorly in both sexes, except in *C. catolethroides*, *C. convexirostris*, *C. latus*, and a few other forms. *C. spathula*, Boh., and its allies would perhaps be better placed in a separate genus. The sexual characters are not very pronounced, but the first ventral segment is often hollowed down the middle in the male. The Central-American forms may be grouped thus:—

a. Prothorax not abruptly excised near the apex.

a¹. Rostrum (except in some specimens of *C. latus* and in *C. puncticollis*) more or less distinctly widened or dilated anteriorly.

a². Prothorax without definite basal excavation, feebly bisinuate at the base.

a³. Head with the (globose) basal and anterior (inter-ocular) portions continuous above, closely punctured.

a⁴. Rostrum sulcate, strongly dilated anteriorly; elytra very long and cylindrical Species 1.

b⁴. Rostrum not sulcate, strongly dilated anteriorly; elytra moderately long.

a⁵. Body almost glabrous Species 2, 3.

b⁵. Body clothed with very minute hair-like scales, conspicuous beneath; prothorax densely punctate and sharply carinate Species 4.

COSSONUS.

- b*³. Head with the (globose) basal portion much smoother than the anterior (inter-ocular) portion, and usually separated from it by a faint transverse groove. [= *BOROPHLÆUS*, Woll.]
- c*⁴. Rostrum short; eyes more or less prominent.
 - c*⁵. Rostrum grooved between the points of insertion of the antennæ (sublinear in *C. puncticollis*, Boh.) Species 5-7.
 - d*⁵. Rostrum without groove.
 - c*⁶. Rostrum very broadly dilated anteriorly Species 8.
 - d*⁶. Rostrum moderately dilated anteriorly Species 9-14.
 - d*⁴. Rostrum nearly as long as the prothorax, the long anterior portion very little wider than the basal portion; eyes not prominent Species 15.
- b*². Prothorax with a definite basal excavation, sometimes extending forwards to the apex or divided down the middle by a smooth carina, the base more or less deeply bisinuate (more feebly so in a few of the smaller forms);.
 - c*³. Head with the (globose) basal and anterior (inter-ocular) portions continuous above, closely punctate.
 - e*⁴. Rostrum with a lanciform excavation extending upwards to the frontal fovea, the apex strongly dilated; prothorax closely punctate, carinate, the basal excavation deep Species 16.
 - f*⁴. Rostrum with a short groove, the apex strongly dilated; prothoracic depression long and shallow Species 17.
 - g*⁴. Rostrum unimpressed, narrow at the base, broadly dilated at the apex; prothoracic excavation long and deep; elytra depressed, with the seriate punctures transverse and closely packed Species 18, 19.
 - h*⁴. Rostrum unimpressed, feebly widened anteriorly, flattened in ♀; prothoracic excavation deep, triangular; elytra with the seriate punctures very coarse and foveiform Species 20.
 - d*³. Head (except in *C. marcidus*) with the (globose) basal portion much smoother than the anterior (inter-ocular) portion, and usually separated from it by a faint transverse groove.
 - i*⁴. The disc of the prothorax without a large, well-defined, smoother or polished space on each side or across the middle.
 - e*⁵. The basal excavation of the prothorax large and deep.
 - e*⁶. Rostrum deeply sulcate, short, strongly dilated anteriorly; prothorax and elytra coarsely punctate Species 21.
 - f*⁶. Rostrum not sulcate*, strongly dilated anteriorly Species 22-27.
 - g*⁶. Rostrum not sulcate, very little widened anteriorly (sublinear in *C. latus*, ♀) Species 28-31.
 - f*⁵. The basal excavation of the prothorax shallower; rostrum dilated anteriorly.
 - h*⁶. Eyes very prominent; elytra variable in colour Species 32.
 - i*⁶. Eyes not so prominent.
 - a*⁷. Elytra black, sometimes in great part rufescent, not vittate Species 33-39.
 - b*⁷. Elytra sharply vittate Species 40.

* Except in some specimens of *C. micraspis*.

- j*⁴. The disc of the prothorax with a large, transverse, smoother space in front of the deep basal excavation; rostrum comparatively long, quadrangularly widened anteriorly Species 41.
- k*⁴. The disc of the prothorax with a large, well-defined, finely punctured or polished space on each side of the excavation.
- g*⁶. Prothorax with a deep basal excavation.
- j*⁶. Elytra black, sometimes in part rufescent or subvittate . . . Species 42-52.
- k*⁶. Elytra sharply vittate Species 53.
- h*⁶. Prothorax with a large shallow excavation limited on each side by two or three oblique rows of coarse or moderately coarse punctures; rostrum very short, about as long as broad; body depressed Species 54, 55.
- b*¹. Rostrum linear in both sexes; head with the basal portion globose and smooth; prothorax feebly depressed or excavate at the base.
- c*². Scutellum large; rostrum moderately long; prothorax finely punctured, not carinate at the base Species 56.
- d*². Scutellum small; rostrum shorter; prothorax coarsely punctured, carinate at the base Species 57.
- b*. Prothorax abruptly excised near the apex, the anterior portion separated from the rest by a very deep transverse groove; eyes depressed; rostrum broadly and obliquely dilated from near the base, sulcate, gibbous; scutellum very small; elytra seriato-foveate Species 58.

1. *Cossonus cylindripennis*, sp. n. (Tab. II. figg. 13, 13 a, ♂.)

Cossonus cylindripennis, Sturm, in litt.

Very elongate, shining, black, the base of the antennæ and the tarsi more or less rufescent. Head somewhat exserted, closely, rather coarsely punctate, shallowly foveate between the rather depressed eyes, and without definite constriction behind them; rostrum short and stout, closely punctate and shallowly sulcate, broadly, transversely, subquadrangularly widened at the apex; antennæ stout, the scape considerably dilated towards the tip, the club ovate. Prothorax about as long as broad, oval, narrowed and constricted in front, flattened or slightly depressed on the disc posteriorly, feebly bisinuate at the base; closely, somewhat coarsely punctate, with or without an incomplete smooth median line, sometimes with a short longitudinal carina at the base. Scutellum small, smooth. Elytra not or very little wider than the prothorax, elongate, cylindrical, parallel to near the apex; coarsely seriate-punctate, the outer interstices narrow and distinctly raised, the inner ones flatter and as broad as the striæ, each with a row of scattered minute punctures. Beneath coarsely punctate; ventral segments 1 and 2 broadly and deeply excavate down the middle, and 5 with a large deep transverse fovea at the apex, in the ♂.

Length $6\frac{1}{4}$ - $9\frac{1}{2}$, breadth $1\frac{1}{2}$ - $2\frac{1}{2}$ millim. (♂ ♀.)

Hab. MEXICO (*Sallé, ex coll. Sturm*: ♂); NICARAGUA, Chontales (*Belt, Janson*: ♀).

One male [type] and three females. A very elongate form, with long, cylindrical, rather narrow elytra, an oval, almost unimpressed prothorax, stout antennæ, and an abruptly widened, shallowly sulcate rostrum; the ventral excavation of the male long and deep, and the apical fovea large.

2. *Cossonus puncticeps*, sp. n. (Tab. II. figg. 14, 14 *a*, ♂.)

Elongate, shining, black, the antennæ (the club excepted) and tarsi ferruginous. Head somewhat exserted, deeply foveate between the very prominent eyes, and without definite constriction behind them, the exposed basal portion and the interocular space closely punctate; rostrum short, strongly, transversely, subquadrangularly dilated at the apex, closely, coarsely punctate. Prothorax somewhat convex, a little broader than long, rounded at the sides, feebly bisinuate at the base, constricted and much narrowed in front; closely, coarsely punctate, except along the smooth, mesially dilated, cariniform median line, without definite basal depression. Scutellum very small, transverse. Elytra slightly wider than the prothorax, long, parallel to beyond the middle, flattened on the disc; punctato-sulcate, the interstices narrow, raised, and faintly uniseriate-punctate. Ventral segments 1 and 2 narrowly sulcate down the middle in the ♂.

Length 5-6½, breadth 1½-1¾ millim.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Three examples from Omilteme; a fourth (immature) from Las Vigas (*Höge*) probably belongs to the same species. More elongate and less rugose than the Guatemalan *C. rugosus*, the exposed basal portion of the head not so coarsely punctate, the prothorax relatively wider and with a conspicuous smooth, raised, median line, the elytra very little broader than the prothorax, with faintly punctate interstices. The rather convex, subcarinate, closely punctured prothorax and the longer and strongly dilated rostrum separate *C. puncticeps* from *C. xylophilus*.

3. *Cossonus rugosus*, sp. n. (Tab. II. figg. 15, 15 *a*, ♂.)

Moderately elongate, shining, black, the elytra with the humeri and a very faint subapical patch (extending forwards towards the shoulders) indeterminately rufescent, the base of the antennæ and the tarsi more or less ferruginous. Head exserted, slightly depressed down the middle between the prominent, rounded eyes, and without definite constriction behind them, the exposed basal portion and the interocular space densely, coarsely punctate; rostrum short, stout, strongly, transversely, subquadrangularly dilated at the apex, coarsely, densely punctate; antennæ stout. Prothorax somewhat convex, a little broader than long, rounded at the sides, feebly bisinuate at the base, constricted and narrowed in front; coarsely, densely punctate, sharply carinate posteriorly, without definite basal depression. Scutellum small, transverse. Elytra much wider than the prothorax, moderately long, subparallel, flattened on the disc, the humeri subangular; coarsely punctato-sulcate, the punctures subtransverse and closely packed, the interstices narrow, raised, and strongly uniseriate-punctate. Beneath closely punctate; ventral segments 1 and 2 slightly depressed down the middle in the ♂.

Length 4¾-5½, breadth 1½-1¾ millim.

Hab. GUATEMALA, Dueñas, on the slope of the Volcan de Fuego (*Champion*).

Three specimens, varying a little in the sculpture of the prothorax and the colour of the elytra. A moderately elongate, very rugose, rather convex form, with the exposed basal portion of the head as coarsely punctured as the interocular space, the eyes prominent, the rostrum abruptly dilated at the apex, the elytra much wider than the prothorax, with strongly punctate, narrow, raised interstices, &c.

4. *Cossonus subopacus*, sp. n. (Tab. II. figg. 16, 16 *a*, ♂.)

Elongate, somewhat depressed, subopaque above, more shining beneath, black, the antennæ (the club excepted) fusco-ferruginous, the tarsi ferruginous; sparsely clothed with minute, hair-like, brownish

scales, which are conspicuous on the under surface. Head exserted, longitudinally foveate between the rather prominent eyes, and without definite constriction behind them, the exposed basal portion and the interocular space densely, finely punctate; rostrum short, rather convex, broadly, transversely, subquadrangularly dilated at the apex, narrow at the base, densely punctate. Prothorax broader than long, rounded at the sides, much narrowed and feebly constricted in front, and feebly bisinuate at the base; densely, finely, uniformly punctate, the disc with a smooth sharp median carina, the basal depression almost obsolete. Scutellum transverse, small, shining. Elytra moderately long, slightly wider than the prothorax, parallel, flattened on the disc; coarsely punctate-striate, the punctures closely packed, the interstices narrow, raised, densely, conspicuously punctate. Ventral segments 1 and 2 very broadly excavate down the middle.

Length $5\frac{1}{10}$ – $6\frac{1}{4}$, breadth $1\frac{2}{5}$ –2 millim. (♂.)

Hab. MEXICO, Juquila in Oaxaca (*Sallé*).

Three males. This is the only Central-American *Cossonus* with a distinct very fine surface-vestiture. The head is exserted and densely punctate; the rostrum is greatly dilated at the tip and rather narrow at the base; the prothorax is sharply carinate and densely punctate; the scutellum is smooth and shining; the elytra have coarsely punctured striæ and densely punctate narrow interstices; and the ventral excavation of the male is unusually broad and deep.

5. *Cossonus depressicollis*. (Tab. II. fig. 17.)

Cossonus depressicollis, Boh. in Schönh. Gen. Curc. iv. p. 1004¹.

Hab. MEXICO, Orizaba (*Mus. Chevrolat*¹).

We do not appear to have received an example of *C. depressicollis*, the type of which is here figured. It approaches *C. xylophilus*, but has the head smaller, the rostrum canaliculate between the points of insertion of the antennæ and relatively narrower, and the prothorax more coarsely, unequally, and rather sparsely punctured, and the short, shallow, rugose depressions at its base a little more marked. The elytra are relatively longer and the prothorax more coarsely punctured than in *C. purulensis*. The very coarse punctures on the disc of the prothorax in *C. depressicollis* are arranged in two strongly sinuate lines down the middle, much as in *C. xylophilus*. The rostrum is narrower at the base, and the prothorax more coarsely and more sparsely punctured, than in *C. subcarinatus*.

6. *Cossonus puncticollis*.

Cossonus puncticollis, Boh. in Schönh. Gen. Curc. iv. p. 1003¹ (nec Wollaston).

Hab. MEXICO¹.

I am unable to identify this species amongst our Mexican material. The supposed type, sent me for examination by Dr. Sjöstedt, is labelled "Calif.," and it does not accord with the description. *C. puncticollis* is said to be "subdepressed, with the frons foveate; the rostrum as long as the head, sublinear (or scarcely narrowed at the base), flattened towards the apex, and very narrowly grooved between the points

of insertion of the antennæ; the prothorax oblong, with almost straight sides, flattened above, thickly punctate, the disc obsoletely carinate and feebly bi-impressed at the base; the elytra closely punctate-striate, with narrow, smooth, convex interstices."

7. *Cossonus multiforus*.

Cossonus multiforus, Say, Descr. Curc. N. Am. p. 30 (1831); Complete Writings, i. p. 298²; Boh. in Schönh. Gen. Curc. iv. p. 1000³.

Hab. MEXICO^{1 2 3}.

Say's type of this insect is lost, and the species is not represented in the Stockholm Museum. It is described by Boheman³ as "rather convex, with the rostrum and frons shortly canaliculate; the rostrum short and strongly quadrangularly dilated at the apex; the prothorax oblong, obsoletely carinate, closely, profoundly punctate, and faintly bi-impressed at the base; the elytra deeply punctate-striate, with convex interstices." The rostrum appears to be more dilated at the apex than in *C. xylophilus* and most of the other species placed by Boheman in his Cent. II. sect. A.

8. *Cossonus latirostris*, sp. n. (Tab. II. fig. 18, ♀*.)

Elongate, rather broad, flattened above, shining, black, the base of the antennæ and the tips of the tarsi ferruginous. Head narrowly, longitudinally foveate and coarsely punctate between the eyes, without definite constriction behind them, the exposed basal portion sparsely punctured, the eyes large and moderately prominent; rostrum very short and broad, strongly, transversely, trapezoidally dilated at the apex, the two portions about equal in length, closely, coarsely punctate, and usually with indications of two short carinæ between the points of insertion of the antennæ. Prothorax oblong, nearly as long as broad, subquadrate, narrowed and constricted in front, and also considerably narrowed at the base, the latter feebly bisinuate; coarsely, closely punctate, except along the smooth, somewhat raised median line, the punctures becoming larger, more scattered, and irregularly distributed on the disc, and smaller and more crowded at the sides, the basal depression wanting. Scutellum transverse, small. Elytra moderately long, not or very little wider than the prothorax, subparallel, transversely depressed below the base; coarsely crenate-striate, the punctures rounded and closely packed, the interstices almost smooth, the outer ones raised and very narrow, those towards the suture flatter and broader. Beneath coarsely, rather sparsely punctate; ventral segments 1 and 2 slightly depressed down the middle in the ♂.

Length 5-6, breadth $1\frac{1}{2}$ - $1\frac{3}{4}$ millim. (♂ ♀.)

Hab. GUATEMALA, San Joaquin and San Gerónimo in Vera Paz (*Champion*).

Sixteen specimens, taken from beneath pine-bark. Larger and broader than *C. crenatus*, Horn †, and *C. corticola*, Say (= *minor*, Woll.), and easily recognizable by the very short, broad, trapezoidally dilated rostrum, with prominent oblique pterygia, the rather less elongate prothorax (which in some examples is considerably rounded at the sides), and the larger eyes.

* The figure 18a, quoted at the bottom of the Plate, was accidentally omitted by our artist.

† Most of the specimens doing duty for this species in British collections appear to belong to *C. piniphilus*, Boh. (= *Borophlaeus murrayi*, Woll., in litt.).

9. *Cossonus hepburni*, sp. n. (Tab. II. fig. 19, head and rostrum, ♂.)

Moderately elongate, somewhat flattened above, shining, black, the base of the antennæ and the tips of the tarsi ferruginous. Head longitudinally foveate and closely punctate between the eyes, the exposed basal portion sparsely punctate, the eyes prominent; rostrum short, transversely, quadrangularly dilated at the apex, the two portions subequal in length, closely, coarsely punctate, and with a small, smooth, tuberculiform prominence between the points of insertion of the stout antennæ. Prothorax a little broader than long, moderately rounded at the sides, slightly constricted in front, feebly bisinuate at the base; closely, coarsely punctate, except along the smooth median line, the latter subcariniform at the base and bordered on each side with a scattered irregular row of larger punctures, the disc flattened posteriorly and more sparsely punctured in the middle than at the sides. Scutellum very small. Elytra moderately long, very little wider than the prothorax, subparallel; coarsely crenate-striate, the striæ becoming broader and deeper and the punctures closely packed towards the base, the interstices narrow, raised, and faintly uniseriate-punctate. Ventral segments 1 and 2 deeply excavate down the middle.

Length $4\frac{1}{2}$, breadth $1\frac{2}{5}$ millim. (♂.)

Hab. MEXICO, Pinos Altos in Chihuahua (*Buchan-Hepburn*).

One male. Near *C. crenatus*, Horn, but relatively broader and with a less elongate prothorax, and the first two ventral segments of the male deeply excavate down the middle. A specimen from Capetillo, Guatemala, may be the female of the same species (or the male of an allied form): it differs from the type in having the globose portion of the head almost smooth, the smooth median line on the prothorax broader, and the ventral excavation faintly indicated. The rostrum is much less dilated anteriorly than in *C. latirostris*.

10. *Cossonus corticola*. (Tab. II. figg. 20, 20 a.)

Cossonus corticola, Say, Descr. N. Am. Curc. p. 24 (July 1831)¹; Complete Writings, i. p. 291²; Boh. in Schönh. Gen. Curc. iv. p. 1005³; Horn, Proc. Am. Phil. Soc. xiii. pp. 437, 439⁴; Leconte, Proc. Am. Phil. Soc. xv. p. 338⁵.

Borophlæus minor, Woll. Trans. Ent. Soc. Lond. 1873, p. 627⁶.

Hab. NORTH AMERICA^{3 6}, Missouri and Pennsylvania^{1 2}, Gulf States⁴.—MEXICO (*Truqui*, Höge); GUATEMALA, Balheu and San Joaquin in Alta Vera Paz (*Champion*).

The Mexican and Guatemalan examples (five in all) provisionally referred to this species are somewhat intermediate between the insects sent me as *C. corticola*, Say, and *C. crenatus*, Horn, by Mr. Barber, of the U.S. Nat. Museum, and a *Cossonus* from Florida given me by Mr. Wickham as *C. impressiformis*, Boh., seems to belong to the same form. These specimens are narrow, elongate, and rather convex, and have a very short, broad, almost undilated rostrum; a deeply foveate frons; large, prominent eyes; an oblong, parallel-sided, coarsely punctured prothorax, with the smooth median line more or less cariniform at the base; and rather narrow, moderately long, closely crenate-striate elytra. They vary from $3\frac{1}{4}$ – $4\frac{1}{4}$ mm. in length. *B. minor* (the three types of which I have seen), as suggested by Leconte⁵, is inseparable from the present species: Wollaston does not appear to have observed that this insect has a relatively

more elongate prothorax than his *B. puncticollis* (= *xylophilus*, Boh.). Both live under the bark of pines. One of Wollaston's types of *B. minor* is figured.

11. **Cossonus xylophilus.** (Tab. II. figg. 21, 21 a.)

Cossonus xylophilus, Boh. in Schönh. Gen. Curc. iv. p. 999¹.

Borophæus puncticollis, Woll. Trans. Ent. Soc. Lond. 1873, p. 627².

Cossonus puncticollis, Sturm, in litt. (nec Boh.).

Hab. MEXICO^{1 2} (*Sallé, ex coll. Sturm; Truqui, Mus. Brit.*), Ciudad in Durango, Las Vigas, Amecameca, Jalapa, Oaxaca (*Höge*), San Andres Chalchicomula, Orizaba (*Sallé*), Tenango del Valle (*Richardson*), Cuernavaca (*Flohr*), Michoacan (*Herrera, in U.S. Nat. Mus.*), Uruapan (*Deam, in U.S. Nat. Mus.*); GUATEMALA, Quiché Mts. (*Champion*).

Sent in numbers from Las Vigas. An elongate, somewhat depressed form, with prominent eyes, a subquadrate, faintly impressed prothorax, and long, parallel, closely crenate-striate elytra, the prothorax moderately bisinuate at the base and in some specimens (as in the type of *C. xylophilus*) considerably narrower than the elytra. The first ventral segment of the male is broadly flattened down the middle. The Tenango examples are marked as having been found under pine-bark. Boheman's type is figured.

12. **Cossonus guatemaltecus**, sp. n.

Moderately elongate, flattened above, shining, black or piceous, the base of the antennæ and the tarsi ferruginous. Head longitudinally foveate and closely punctate between the eyes, the globose basal portion almost smooth, the eyes prominent; rostrum very short, transversely, quadrangularly dilated at the apex (in one of the Zapote specimens faintly canaliculate between the points of insertions of the antennæ), the two portions about equal in length, closely, finely punctate. Prothorax slightly broader than long, very gradually or arcuately narrowing from a little before the base to the transverse subapical constriction, the base feebly bisinuate; somewhat finely and not very closely punctate, except along the smooth median line, the latter subcariniform at the base and sometimes bordered with a few coarser punctures, the disc flattened, but without definite basal excavation. Scutellum small. Elytra moderately long, subparallel, very little wider than the prothorax; somewhat finely punctate-striate, the interstices almost flat. Beneath sparsely, finely punctate; ventral segments 1 and 2 rather broadly excavate down the middle in the ♂.

Length $2\frac{1}{2}$ – $3\frac{5}{8}$, breadth $\frac{3}{4}$ – $1\frac{1}{10}$ millim. (♂ ♀.)

Hab. GUATEMALA, Zapote and San Gerónimo (*Champion*).

Five examples. Smaller and less elongate than *C. xylophilus*, the puncturing of the prothorax and elytra not so coarse, the dorsal interstices of the latter flat, the rostrum a little narrower at the base, the ventral excavation of the male long and deep. The non-excavate base of the prothorax, &c., separate the present species from *C. exaratus*, *C. impressus*, and various other small forms. More depressed than *C. depressicollis*, the disc of the prothorax somewhat finely, subequally punctate.

BIOL. CENTR.-AMER., Coleopt., Vol. IV. Pt. 7, December 1909.

HH

13. *Cossonus subcarinatus*, sp. n.

Moderately elongate, flattened above, shining, black or nigro-piceous, the tarsi and the base of the antennæ ferruginous. Head foveate and closely punctate between the eyes, the exposed basal portion faintly punctured, the eyes prominent; rostrum short, feebly, transversely, quadrangularly dilated at the apex, the two portions about equal in length, closely punctate. Prothorax a little broader than long, moderately rounded at the sides (or subobliquely narrowing forwards) to the distinct transverse subapical constriction, feebly bisinuate at the base; closely, rather coarsely punctate, the disc triangularly flattened posteriorly, and with an irregular row of coarser punctures along each side of the smooth, narrow, incomplete median line. Scutellum very small. Elytra moderately long, subparallel, flattened anteriorly; closely crenate-striate, the interstices obsoletely uniseriate-punctate, narrow, and feebly convex. Beneath rather closely punctate; ventral segments 1 and 2 depressed down the middle in the ♂.

Length $3\frac{1}{2}$ – $4\frac{1}{2}$, breadth $1\frac{1}{10}$ – $1\frac{1}{8}$ millim.

Hab. MEXICO (*Solari*, ex Höge).

Five specimens. This is a form of *C. guatemaltecus* with the prothorax and elytra more strongly, and the under surface more closely, punctate, and the rostrum a little less dilated at the tip. It is less elongate and more depressed, and has a narrower rostrum, than *C. xylophilus*. The less elongate prothorax, more depressed form, and narrower rostrum also separate *C. subcarinatus* from *C. crenatus* and *C. corticola*. The specimens are labelled as from "Sierra de Durango," but no reliance can be placed on that locality.

14. *Cossonus carinifer*, sp. n.

Elongate, somewhat convex, shining, black, the base of the antennæ and the tarsi ferruginous. Head rather small, deeply foveate and closely punctate between the eyes, the globose basal portion almost smooth, the eyes feebly convex; rostrum short, quadrangularly dilated at the apex, the basal portion slightly longer than the apical, finely punctate. Prothorax oblong, somewhat obliquely narrowed from near the base to the faint subapical constriction, the base feebly bisinuate; coarsely, closely, unequally punctate, the disc slightly depressed and subcarinate down the middle, the carina becoming sharply defined posteriorly and the depression widening out into a shallow, triangular, punctured area. Scutellum very small. Elytra not or very little wider than the prothorax, parallel, flattened on the disc anteriorly; closely crenate-striate, the striæ becoming broader and deeper and the punctures larger towards the base, the interstices faintly uniseriate-punctate, narrow, and more or less convex. Ventral segments 1 and 2 narrowly depressed down the middle in the ♂.

Length $3\frac{3}{4}$ –5, breadth $1\frac{1}{10}$ – $1\frac{1}{2}$ millim.

Hab. BRITISH HONDURAS, Rio Sarstoon (*Blancaneaux*).

Five specimens; a sixth from the same locality seems to belong to the same species, but it has the prothorax more convex and unimpressed and the eyes somewhat depressed. This insect is related to *C. xylophilus*, *C. crenatus*, and other pine-bark forms, differing from most of the allied Central-American species in its distinctly longer rostrum, the basal portion of which is considerably narrower than in *C. xylophilus*. The short longitudinal carina at the base of the prothorax is sharply defined, as in the N.-American *C. impressifrons*, Boh., a species unknown to me, but apparently different from *C. carinifer*.

15. *Cossonus silbermanni*. (Tab. II. fig. 22, 22 α , φ .)

Phlaeophagus silbermanni, Boh. in Schönh. Gen. Curc. iv. p. 1048¹.

Hab. MEXICO¹ (*Höge*, in coll. *Solari*), Chilpancingo in Guerrero (*H. H. Smith*), Parada in Oaxaca (*Sallé*).

I have not seen the type of this species, which cannot now be found in the Stockholm Museum, but the four specimens before me, including one (φ) thus labelled in the Sallé collection, agree very nearly with the description. This insect has a comparatively elongate, subcylindrical rostrum, with the slightly widened apical portion longer than in the other Mexican *Cossoni*. The anterior portion of the head (with the depressed eyes) is small, and much narrower than the smooth, globose basal portion. The prothorax is subparallel at the sides posteriorly, and very coarsely punctate, especially towards the base, which is almost unimpressed and has a short median carina. The elytra are long, much wider than the prothorax, rather convex, very coarsely crenate-striate, with narrow raised interstices. The male has a slightly shorter rostrum than the female, and the first two ventral segments feebly depressed down the middle. *C. silbermanni* is not unlike the N.-American *C. piniphilus*, Boh., but it has the rostrum nearly as long as the prothorax, &c. The Oaxaca specimen is figured.

16. *Cossonus cavirostris*, sp. n. (Tab. II. figg. 23, 23 α , σ .)

Elongate, rather broad, depressed, moderately shining, finely alutaceous above, ferruginous or fusco-ferruginous. Head somewhat exserted, densely punctate, foveate between the large and feebly convex eyes, and without trace of constriction behind them; rostrum very short and broad, abruptly dilated anteriorly, densely punctate, transversely grooved along the apical margin, and with a deep, elongate, almost smooth, lanciform, median sulcus extending upwards to the frontal fovea; antennal club ovate, moderately large. Prothorax transverse, strongly rounded at the sides, constricted and much narrowed in front, deeply bisinuate at the base, broadly depressed in the middle behind; closely, unequally punctate, the punctures coarse and crowded along either side of the smooth, sharply-defined, mesially-widened, median carina, and more diffuse and finer on each side of the rugose basal depression. Scutellum comparatively large, subquadrate. Elytra elongate, a little wider than the prothorax, parallel, flattened or transversely depressed below the base, the humeri subangular; coarsely seriate-punctate, the punctures strongly transverse along the basal portion of the sutural stria, the interstices rather narrow, somewhat convex (especially at the base, sides, and apex), and with scattered minute punctures. Beneath very sparsely punctate; ventral segments 1 and 2 broadly depressed down the middle in the σ . Tibiæ flattened, broad, and sinuate, the anterior pair with a triangular tooth on the lower edge towards the tip in the σ .

Length $6\frac{1}{5}$ – $9\frac{1}{2}$, breadth $2\frac{1}{5}$ –3 millim. (σ φ .)

Hab. COSTA RICA, San Carlos (*U.S. Nat. Mus.*); PANAMA (*Mus. Brit., coll. Fry*).

Six specimens, scarcely differing in colour. A large, broad, depressed form, not unlike *Megalocorynus depressus*, with a very short, broad, densely-punctured, apically-dilated rostrum in both sexes; the rostrum with an almost smooth, lanciform excavation in the middle above; the head exserted; the prothorax transverse, strongly

rounded at the sides, carinate, and unequally punctate; the scutellum rather large; the elytral interstices convex and subsinuate at the base.

17. *Cossonus bisulcatus*, sp. n. (Tab. II figg. 24, 24 a, ♂.)

Very elongate, depressed, rather broad, rufo-piceous (?immature), moderately shining. Head somewhat exserted, rather small, longitudinally foveate between the eyes, and feebly constricted on each side behind them, the interocular space and vertex closely punctate, the eyes large and somewhat depressed; rostrum very short, abruptly, transversely, trapezoidally dilated at the apex, sharply sulcate between the points of insertion of the antennæ, closely punctate, the pterygia rounded; antennæ stout, with a large, ovate club. Prothorax transverse, rounded at the sides, narrowed and constricted in front, moderately bisinuate at the base; closely, coarsely, irregularly punctate, the disc flattened and with a broad, shallow, elongate-triangular depression extending forwards to the transverse subapical constriction, the flattened space more finely punctate externally and with about three irregular rows of larger impressions on each side of the smooth raised median line. Scutellum rounded. Elytra scarcely wider than the prothorax, elongate, subparallel; coarsely crenate-striate, the punctures rounded and closely placed, the interstices obsoletely uniseriate-punctate, narrow, the outer ones raised. Beneath coarsely, rather sparsely punctate; ventral segments 1 and 2 broadly depressed down the middle, 5 ochreo-pilose along the apical margin.

Length $7\frac{2}{5}$, breadth $2\frac{1}{4}$ millim. (♂.)

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

One male, probably not quite mature. An elongate, depressed form, with the rostrum very short, narrowly and sharply sulcate between the points of insertion of the antennæ, and abruptly trapezoidally dilated at the tip; the head foveate between the eyes and closely punctured on the vertex; the prothorax rather short, longitudinally, depressed and very coarsely punctate down the middle; the elytra elongate and coarsely crenate-striate. Narrower than *C. cavirostris*, the head smaller, the rostrum differently shaped, the prothoracic depression shallower at the base, &c.

18. *Cossonus planus*, sp. n. (Tab. II. figg. 25, 25 a.)

Elongate, broad, depressed, moderately shining, black, the extreme base of the antennæ, and sometimes the tarsi also, ferruginous. Head somewhat exserted, foveate between the eyes, the interocular space and the exposed basal portion densely punctate, the eyes prominent; rostrum short, broadly, transversely dilated at the apex, the basal portion rather narrow and longer than the apical, densely punctate. Prothorax transverse, rounded at the sides, constricted and much narrowed in front, deeply bisinuate at the base; closely punctate, the disc with an elongate-triangular, carinate, more coarsely punctured area extending from the base to the subapical constriction. Scutellum rather large, subquadrate, flat. Elytra moderately long, much wider than the prothorax, subparallel, flattened on the disc; with rows of closely packed, moderately coarse, transverse punctures, separated by narrow, feebly uniseriate-punctate, raised interstices, the latter becoming wider and flatter towards the suture. Beneath closely punctate; ventral segments 1 and 2 hollowed down the middle in the ♂, broadly flattened in the ♀. Anterior coxæ separated by about their own width.

Length 5-7, breadth $1\frac{2}{3}$ - $2\frac{2}{5}$ millim. (♂ ♀.)

Hab. ? MEXICO (*Mus. Brit., ex coll. Janson*).—BRAZIL, Rio Janeiro (*coll. Fry*).

Not uncommon in Brazil and doing duty for *C. deplanatus*, Boh., in various collections, but not agreeing with the description of that species. The single specimen

from "Mexico," obtained from the Janson collection, may be wrongly labelled as to locality. This insect superficially resembles *Megalocorynus depressus*, Boh. It is nearly related to *C. semirufus*, which has a very extended distribution, differing from the black form of that species in the much less rugose, carinate depression on the prothorax and the strongly transverse punctures of the elytral striae.

19. *Cossonus semirufus*. (Tab. II. figg. 26, 26 a.)

Cossonus semirufus, Boh. in Schönh. Gen. Curc. iv. p. 1009¹.

Var. The elytra wholly black; the disc of the prothorax with a narrow space exterior to the long, rugose, median depression densely, moderately coarsely punctate; the elytral interstices very narrow, closely punctured, the seriate punctures large, transverse, and closely packed.

Hab. MEXICO, Orizaba¹ (*Mus. Holm.*); GUATEMALA, Senahu in Vera Paz, Cerro Zunil, Zapote (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).—COLOMBIA, Santa Marta (*Mus. Brit.*); ECUADOR, Macas (*Buckley*); BRAZIL, Pará.

Not uncommon in Chiriqui. The type of this insect (♀) has rather more than the basal half of the elytra rufescent, but this colour sometimes extends over the whole of their surface, or may be entirely wanting, as in the two examples from Zapote and one from Pará. The head is somewhat exserted and the exposed portion is densely punctate. The rostrum is short, rather narrow at the base, abruptly dilated at the tip, and so densely punctured as to appear opaque. The prothorax has the coarsely rugose depressed area extending forwards to the short tubulate apical portion, and the base very deeply bisinuate. The elytra are rather broad and flattened, the seriate punctures being usually crowded and strongly transverse, but they are more rounded and less closely placed in the type and in some of the other specimens before me. The anterior tibiae are sinuate within. The ventral segments 1 and 2 are depressed down the middle in the male. The single example seen from Santa Marta has less than the basal half of the elytra, and the greater part of the ventral surface, rufo-testaceous; the wholly black one from Pará represents *C. fossatus*, Boh.*, in the British Museum. The sculpture of the prothorax, like that of the elytra, is variable, but the long, depressed, rugose area on the disc of the former is always very conspicuous.

20. *Cossonus planirostris*, sp. n. (Tab. II. figg. 27, 27 a, ♀.)

Elongate, somewhat convex, shining, black, the basal half of the antennae and the tarsi more or less ferruginous. Head somewhat exserted, rather small, foveate between the eyes, the interocular space and the exposed large basal portion closely punctate, the eyes somewhat prominent; rostrum (♀) almost straight, short, flattened, gradually widened outwards, closely punctate, and with the subquadrate apical portion as long as broad, (♂) somewhat convex and with the apical portion transverse; antennal club stout, ovate. Prothorax slightly broader than long, moderately rounded at the sides, feebly constricted and much narrowed in front, deeply bisinuate at the base; coarsely, closely punctate, the punctuation

* Boheman's *C. fossatus* is said to have the elytra "supra parum convexa."

irregular and a little more diffuse around the large, deep, rugose, subtriangular basal depression, the latter sometimes with a short longitudinal carina at the base. Scutellum very small, narrow. Elytra slightly wider than the prothorax, subparallel, flattened below the base; very coarsely and closely seriate-punctate, the punctures at the base of the suture strongly transverse, the interstices narrow, convex, faintly punctate. Beneath somewhat closely punctate, the ventral segments 1 and 2 very slightly depressed down the middle posteriorly. Anterior tibiae almost straight on their inner edge. Length 6-7½, breadth 2-2½ millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Belt, Janson*).

One male* and three females. Recognizable by the short, almost straight, flattened (♀) or feebly convex (♂), gradually widened rostrum, and the deep, rugose, subtriangular basal fovea of the prothorax, the disc of the latter coarsely, closely, irregularly punctate. The rostrum is flatter, more closely punctate, and more narrowed towards the base than in *C. latus*. The present species is the only Central-American species of the genus at present known with the rostrum differing markedly in form in the two sexes, that of the female being much flattened.

21. ***Cossonus corticalis***. (Tab. II. figg. 28, 28a, ♂.)

Cossonus corticalis, Fabr. Syst. Eleuth. ii. p. 497¹; Rosensch. in Schönh. Gen. Curc. iv. p. 1012²;

Oliv. Ent. v. no. 83, p. 426, t. 35. fig. 536³.

Cossonus bulbirostris, Perty, Del. Anim. Art. Bras. p. 83, t. 16. fig. 14⁴.

Cossonus reticulatus, Sturm, Cat. p. 125 (1826)⁵.

Cossonus sulcirostris, Boh. in Schönh. Gen. Curc. iv. p. 1011⁶; Faust, Stett. ent. Zeit. 1896, p. 133⁷ [nec *C. sulcirostris*, Fall, Canad. Ent. xli. p. 169 (May, 1909)⁸].

Cossonus sulcifrons, Dupont, in Mus. Brit. ⁹.

Hab. MEXICO ^{6 9}, Durango, Guerrero, Vera Cruz, Oaxaca, Chiapas, &c.; BRITISH HONDURAS; GUATEMALA; HONDURAS, Ruatan I.; NICARAGUA; COSTA RICA; PANAMA.—SOUTH AMERICA ¹, Colombia ², Venezuela ⁷, Ecuador, Cayenne ³, Brazil ^{2 4 5}, Peru, Trinidad, &c.

An abundant insect throughout Tropical America, ranging from Durango to Brazil. It is easily recognizable by the short, abruptly, apically dilated, sulcate rostrum in both sexes; the very coarsely, unequally punctate prothorax (a longitudinal irregular space along either side of the disc being always here and there impunctate or sparsely and much more finely punctured), with a triangular, rugose, carinate basal fovea, preceded by an irregular double row of coarse punctures; the coarsely crenate-striate elytra, &c. The first two ventral segments are slightly depressed down the middle in the male. I have seen about 150 examples from the above-quoted Central and S.-American localities, and there can be no reason to suppose that *C. sulcirostris* is specifically distinct from *C. corticalis*. The rostral groove is sometimes shallow or interrupted in the middle. The length varies from 4-8½ mm. *C. sulcirostris*, Fall, from San José del Cabo, Lower California ⁸, is stated to have the rostrum feebly dilated apically,

* Since lost, while under examination. The specimen figured is a ♀, not a ♂ as stated at the bottom of the Plate.

the prothorax longer than broad, the elytral interstices almost flat, and the legs rufous: it must be yet another species and the name *falli* is here suggested for it. The type (♀) of *C. sulcirostris*, Boh., has been communicated by Dr. Sjöstedt.

22. **Cossonus convexicollis.** (Tab. II. figg. 29, 29 a.)

Cossonus convexicollis, Boh. in Schönh. Gen. Curc. iv. p. 1017¹.

Hab. MEXICO (*Höge*, in coll. *Solari*), Orizaba¹ (*Mus. Holm.*), Toxpam, Juquila (*Sallé*); GUATEMALA, Zapote (*Champion*).

Found in some numbers at Toxpam and Zapote. This species is relatively narrower than *C. corticalis* (*sulcirostris*), thus appearing more elongate. The rostrum is less dilated at the apex, not sulcate, and finely punctate. The eyes are depressed. The head is rather small, deeply foveate, and coarsely punctured between the eyes, the globose basal portion almost smooth. The prothorax is as long as broad, very coarsely, unequally punctate, the large, deep, rounded punctures along the middle of the disc being arranged in an irregular row on each side of the smooth cariniform median line; the disc often has an indeterminate polished, narrow, longitudinal space of variable extent on each side of the shallow median depression, the latter being widened out into a subtriangular deeper area at the base. The first ventral segment is depressed down the middle in the male. The length varies from $4\frac{1}{2}$ –6 mm.

23. **Cossonus scrobiculatostratus.** (Tab. II. figg. 30, 30 a.)

Cossonus scrobiculatostratus, Boh. in Schönh. Gen. Curc. viii. 1, p. 269¹.

Hab. MEXICO (*Mus. Brit.*), Toxpam (*Sallé*), Las Vigas, Oaxaca (*Höge*), Atoyac in Vera Cruz (*H. H. Smith*); GUATEMALA, Calderas on the Volcan de Fuego (*Champion*); NICARAGUA, Chontales (*Janson*); COSTA RICA, La Palma (*Biolley*).—BRAZIL¹; TRINIDAD; ANTILLES, St. Vincent¹ (*H. H. Smith*).

Numerous specimens from the above-quoted localities, including a short series from La Palma, agree perfectly with others found by Mr. H. H. Smith at St. Vincent, which are evidently referable to Boheman's species. They are very like *C. corticalis*, F. (*sulcirostris*, Boh.); but the rostrum is not sulcate, the prothorax has a very deep triangular excavation at the base (usually without, but sometimes with, a short median carina), and the elytra are striato-foveolate (the foveiform impressions rounded or oval, and not very closely placed), the interstices becoming narrower, sinuous, and subcostate anteriorly. The ventral depression of the male is shallow. *C. guildingi*, Boh., from St. Vincent, to judge from the material before me, is scarcely more than a small, narrow, less concave form of the subsequently-described *C. scrobiculatostratus*. A Costa Rican specimen is figured.

24. **Cossonus perfidiosus.** (Tab. II. figg. 31, 31 a.)

Cossonus perfidiosus, Boh. in Schönh. Gen. Curc. iv. p. 1016¹; Faust, Stett. ent. Zeit. 1896, p. 133².

Cossonus curvatus, Chevr. in Mus. Brit.³.

Hab. MEXICO³ (*Höge*, in coll. *Solari*), Toxpam (*Sallé*); BRITISH HONDURAS (*Blancaneaux*); NICARAGUA (*Mus. Brit.*, *Sallé*), Chontales (*Janson*); COSTA RICA, Valle de Baru (*Pittier*), Machuca and Surubres, Pacific slope (*Biolley*); PANAMA, Volcan de Chiriqui (*Champion*).—VENEZUELA, Caracas, La Guayra¹, San Esteban².

The thirty-five specimens from our region here referred to *C. perfidiosus* (including about a dozen from Machuca), the Venezuelan type of which I have not seen, are extremely like the smaller examples of *C. scrobiculatostratus*, differing from them in having a slightly shorter, more rugose, obsoletely carinate rostrum, and the seriate punctures on the elytra not so large (except at the base, where they are often subquadrate) and more crowded, the interstices becoming very narrow, sinuous, and sharply costate anteriorly. The absence of definite polished spaces on the disc of the prothorax and the shorter and more rugose rostrum separate *C. perfidiosus* from *C. foveatus* and *C. lebasi*; and the comparatively broader, more convex form, the subcarinate rostrum, and the smaller and more closely placed punctures on the elytra distinguish it from *C. guildingi*. A large female from Toxpam (length 7 mm.) with somewhat depressed, castaneous elytra, and two distinct almost impunctate spaces on the disc of the prothorax, may belong here. The other examples vary from $3\frac{4}{5}$ – $5\frac{1}{4}$ mm. in length. A Machuca specimen is figured, but it is not so broad as represented by our artist.

25. **Cossonus euryaspis**, sp. n. (Tab. II. figg. 32, 32 a.)

Elongate, somewhat convex, shining, black or piceous (immature), the tarsi partly or entirely ferruginous.

Head deeply foveate and coarsely punctured between the eyes, the globose basal portion almost smooth, the eyes not prominent; rostrum short, broadly, transversely, subquadrangularly dilated at the apex, narrowed towards the base, closely, rather coarsely punctate. Prothorax a little broader than long, deeply bisinuate at the base, narrowed and constricted in front, the sides moderately or strongly rounded; coarsely, closely, unequally punctate, the punctuation becoming more diffuse on the disc, the latter with a large, deep, rugose, shortly-carinate, triangular excavation at the base which is continued shallowly forwards to near the apex. Scutellum strongly transverse, smooth. Elytra elongate, usually wider than the prothorax, subparallel; coarsely and closely crenate-striate, the interstices narrow, more or less convex (especially towards the base), almost straight, obsoletely uniseriate-punctate. Beneath rather sparsely punctate; ventral segments 1 and 2 somewhat deeply (♂) or shallowly (♀) excavate down the middle. Anterior coxæ separated by less than their own width.

Length $5\frac{1}{2}$ –9, breadth $1\frac{4}{5}$ –3 millim. (♂ ♀.)

Hab. COSTA RICA (*Rogers*), La Palma, Tarbaca, Tablazo, Volcan de Barba, 1500–1700 metres (*Biolley*), Irazu (*U.S. Nat. Mus.*).

Sixteen specimens, varying greatly in the development of the prothorax (as is the case in many Cossonids), the sides being sometimes strongly rounded and the disc tumid on each side of the median depression. More elongate and less convex than

C. scrobiculatostratus, the scutellum strongly transverse, the seriate punctures on the elytra more closely packed, the interstices straighter, the prothorax more equally punctate.

26. *Cossonus micraspis*, sp. n. (Tab. II. figg. 33, 33 a.)

Elongate, somewhat convex, shining, black (the elytra rufo-piceous in one immature specimen), the tarsi and the base of the antennæ ferruginous. Head foveate and coarsely punctured between the eyes, the globose basal portion almost smooth, the eyes not prominent; rostrum short, broadly, transversely, subquadrangularly dilated at the apex, narrowed towards the base, the basal portion sometimes shallowly canaliculate, closely, rather coarsely punctate. Prothorax a little broader than long, deeply bisinuate at the base, narrowed and feebly constricted in front, more or less rounded at the sides; coarsely, closely punctate, the punctuation becoming more diffuse and slightly finer on each side of the irregularly biseriately punctate, shallow, median groove, the latter terminating posteriorly in a large, triangular, rugose, shortly-carinate excavation. Scutellum very small, narrow. Elytra usually wider than the prothorax, long, subparallel; closely and coarsely crenate-striate, the interstices rather convex, narrow, almost straight, minutely uniseriate-punctate. Beneath somewhat closely punctate; ventral segments 1 and 2 very slightly hollowed down the middle in the ♂, unimpressed in the ♀. Anterior coxæ separated by about their own width.

Length $4\frac{1}{2}$ - $7\frac{1}{2}$, breadth $1\frac{1}{2}$ - $2\frac{1}{2}$ millim. (♂ ♀.)

Hab. MEXICO (*Mus. Brit.*), Omilteme and Xucumanatlan in Guerrero (*H. H. Smith*), Las Vigas, Huitzo (*Höge*), Juquila in Oaxaca (*Sallé*).

Numerous examples, mostly from Juquila and Omilteme. This insect has long been known in collections under the MS. name of *Cossonus ambiguus*, Chev.*. *C. micraspis* is the Mexican representative of the Costa Rican *C. euryaspis*, from which it may be separated by the narrow (not transverse) scutellum, the more closely punctured under surface, and the feebly excavate first ventral segment in the male. From *C. scrobiculatostratus* and *C. perfidiosus* (both of which have a small scutellum) the present species may be known by the more closely punctured prothorax, the abruptly dilated rostrum, the straighter elytral interstices, &c.

27. *Cossonus rufonotatus*, sp. n. (Tab. II. figg. 34, 34 a.)

Moderately elongate, depressed, shining, nigro-piceous, the prothorax piceous down the middle, the elytra each with an indeterminate transverse patch on the outer part of the disc at the base, a spot near the apex, and the lower margin, from about the basal third to the tip, rufous, the tarsi and the base of the antennæ ferruginous. Head foveate, transversely grooved and sparsely punctate between the eyes, the globose basal portion smooth, the eyes prominent; rostrum more than half the length of the prothorax, curved, strongly, transversely, quadrangularly dilated at the tip, the narrow basal portion longer than the apical and gradually widened outwards, rather sparsely punctate; antennal club large. Prothorax slightly broader than long, narrow, bisinuate at the base, narrowed and distinctly constricted in front, the hind angles rather sharp; the disc with two deep, oblong, subtriangular, rugose, basal foveæ, separated by the smooth median ridge, the rest of the surface uneven and somewhat closely punctate. Scutellum transverse. Elytra much wider than the prothorax, subparallel in their basal half, the humeri rather

* Not *C. ambiguus*, Boh., an insect from an unknown locality (? Ceylon), the description of which will not apply to the present insect.

prominent; closely crenate-striate, the interstices raised, narrower than the striae, and minutely uniseriate-punctate.

Length $3\frac{1}{2}$, breadth $1\frac{1}{8}$ millim.

Hab. GUATEMALA, Purula in Vera Paz (*Champion*).

One specimen. A small, depressed form, with a narrow, uneven, deeply bifoveate, carinate, closely punctured prothorax, broad, closely crenate-striate, rufo-maculate elytra, and an apically dilated rostrum. The colour of the elytra may prove to be variable. The *C. parvicollis* is an allied Mexican species.

28. *Cossonus latipennis*, sp. n. (Tab. III. figg. 1, 1 *a.*)

Very elongate, shining, black, the base of the antennae and the tips of the tarsi ferruginous. Head foveate and rugosely punctate between the eyes, the globose basal portion sparsely punctured, the eyes large and not very prominent; rostrum short, stout, closely punctate, the apical portion distinctly flattened, subquadrate, and slightly wider than the basal portion; antennal club stout, ovate. Prothorax a little broader than long, rounded at the sides, feebly constricted and much narrowed in front, deeply bisinuate at the base; closely, moderately coarsely punctate, the disc with a deep, oblong, subquadrate, confluent punctured, interruptedly carinate excavation at the base. Scutellum subquadrate, smooth. Elytra very much wider than the prothorax, elongate, subparallel, transversely depressed below the base; coarsely seriate-punctate, the punctures along the anterior part of the suture strongly transverse, the interstices very narrow, convex or cariniform, here and there transversely or obliquely confluent, and each with a few widely scattered extremely minute punctures. Ventral segments closely punctate, 1 and 2 broadly flattened or hollowed down the middle. Tarsi long.

Var. The elytral interstices strongly and irregularly reticulate throughout, the interspaces elongate, oblong, or foveiform.

Length $7\frac{5}{8}$ –9, breadth $2\frac{3}{4}$ –3 millim. (σ .)

Hab. GUATEMALA, Dueñas [type], San Gerónimo [var.] (*Champion*).

Four specimens from Dueñas and one from San Gerónimo. A large form, with unusually broad elytra, the narrow raised interstices of which are here and there transversely connected, an oblong, deep, subquadrate excavation at the base of the prothorax, a short, feebly constricted rostrum, &c. The San Gerónimo example (unfortunately injured after the above description was written) may prove to belong to a different species.

29. *Cossonus sargi*, sp. n. (Tab. III. figg. 2, 2 *a.*)

Very elongate, shining, black (or piceous, when not fully mature), the base of the antennae and the tips of the tarsi ferruginous. Head foveate and rugosely punctate between the eyes, the latter large and not prominent; rostrum short, stout, convex, somewhat flattened at the tip, the apical portion transversely subquadrate and a little wider than the parallel-sided basal portion, closely punctate, a narrow oblong space in the middle excepted; antennal club stout, ovate. Prothorax slightly broader than long, rounded at the sides, constricted and much narrowed in front, deeply bisinuate at the base; coarsely, closely punctate, the puncturing becoming more diffuse on the disc, the latter with a rather broad, deep, rugosely punctured, interruptedly carinate, subtriangular excavation at the base. Scutellum smooth, subquadrate. Elytra much wider than, and fully three times the length of, the prothorax, subparallel; coarsely seriate-punctate, the punctures becoming transverse towards the sides and base, the interstices very narrow, convex, and each with an irregular row of scattered extremely minute punctures. Ventral segments rather sparsely punctate 1 and 2 depressed down the middle in the σ . Tarsi long.

Length $6\frac{1}{2}$ –9, breadth 2– $2\frac{1}{8}$ millim. (σ ♀.)

Hab. GUATEMALA (*Salvin*), Totonicapam (*Champion*), Volcan de Acatenango (*Sarg*).

Found in numbers in the pine-forests, at an elevation of about 10,000 feet. A very elongate form belonging to the same group as *C. latus*, with a relatively smaller and more densely punctured prothorax, more prominent pterygia, and less coarsely seriate-punctate elytra. Larger than the N.-American *C. piniphilus*, Boh., the prothorax with a deep basal excavation, &c.

30. **Cossonus latus.** (Tab. III. figg. 3, 3 a, ♀.)

Cossonus latus, Boh. in Schönh. Gen. Curc. iv. p. 1038 (♀)¹.

Hab. MEXICO¹ (*Mus. Brit.*), Orizaba (*Mus. Holm.*; *Sallé*), Toxpam (*Sallé*), Jalapa (*Höge*), Omilteme in Guerrero (*H. H. Smith*); GUATEMALA, Capetillo (*Champion*).

This species may be known by its short, sublinear, or very slightly widened, convex, sparsely, finely punctate rostrum; the head is coarsely punctate and deeply longitudinally foveate between the eyes, the globose basal portion being almost smooth; the prothorax is very coarsely punctate, and has a deep, rugose, subtriangular, basal fovea, the puncturing on the disc being sometimes rather sparse; the elytra vary greatly in length, and are very coarsely seriate-punctate, with narrow convex interstices; the ventral segments 1 and 2 are broadly, shallowly depressed down the middle in the male. The rostrum in fully-developed males is very slightly widened towards the apex, but in the smaller males it is linear, as in the female. The type (♀) is a very large elongate specimen from Orizaba. The length varies from $5\frac{4}{5}$ –9 mm.

31. **Cossonus affaber.** (Tab. III. figg. 4, 4 a, ♂.)

Cossonus affaber, Boh. in Schönh. Gen. Curc. viii. 2, p. 274¹.

Hab. MEXICO (*Mus. Sommer*¹; *Mus. Brit.*).

Of this species there is a single specimen (♂) in the British Museum. It is very like *C. latus* (the type of which is ♀); but differs from the male of that insect in having a more elongate excavation on the disc of the prothorax at the base, the seriate punctures on the elytra larger and foveiform, and the raised interstices narrower and more sinuous, and the rostrum a little more closely punctate. The apical portion of the rostrum is subquadrate, and very slightly wider than the basal portion, in the male. The ventral depression is shallow.

32. **Cossonus bicolor**, sp. n. (Tab. III. figg. 5, 5 a, ♂.)

Cossonus bicolor, Sallé, in litt.

Elongate, depressed, shining, black, usually with the basal half of the elytra (or an oblong patch on the disc of each of them at the base), the tips of the tarsi, and the abdomen rufescent, sometimes almost wholly black or piceous. Head (the smooth globose basal portion excepted) coarsely, confluent punctate, with an oblong fovea in the middle between the large, convex, very prominent eyes, the fovea often sulciform and extending forwards on to the rostrum; rostrum very short, broad, transversely dilated at the apex,

coarsely punctate, the apical portion smoother; antennal club stout, ovate. Prothorax a little broader than long, somewhat oval, constricted and much narrowed in front, deeply bisinuate at the base; with an elongate, subtriangular, flattened or slightly depressed space on the middle of the disc posteriorly, the disc impressed with numerous, irregularly distributed, very coarse, rounded punctures, except along the smooth median line (which becomes cariniform at the base), the sides closely and more finely punctured, Scutellum rather large. Elytra a little wider than the prothorax, subparallel; coarsely seriate-punctate, the interstices narrow, rather convex, faintly uniseriate-punctate. Beneath closely punctate; ventral segments 1 and 2 slightly depressed down the middle in the ♂.

Length $4\frac{2}{5}$ – $7\frac{4}{5}$, breadth $1\frac{1}{8}$ – $2\frac{1}{2}$ millim. (♂ ♀.)

Hab. MEXICO (*Mus. Brit.*), Toxpam (*Sallé*); GUATEMALA, Zapote, Cerro Zunil (*Champion*); COSTA RICA, La Palma, Tarbaca (*Biolley*).

This insect is not uncommon in Mexico and Guatemala, and it has long been known in collections under the MS. name *C. bicolor*. The three examples from Costa Rica are uniformly black or rufo-piceous (as are also two of those from Cerro Zunil), and have the frontal fovea less extended, but they seem to belong to the same species. An elongate depressed form, with a short, broad, apically dilated rostrum, very prominent eyes, an oblong frontal fovea, the disc of the prothorax very coarsely punctate, and the basal half of the elytra usually rufescent.

33. *Cossonus circumfusus*, sp. n. (Tab. III. figg. 6, 6 a, ♂.)

Elongate, narrow, depressed, shining, black, the elytra (except at the apex and along the sides posteriorly), abdomen, and tarsi rufescent, the antennæ fusco-ferruginous. Head foveate and punctate between the eyes, the globose basal portion almost smooth, the eyes large and prominent; rostrum rather convex, short, stout, broadly, transversely, subquadrangularly dilated at the apex, somewhat closely punctate, unimpressed; antennal club large, ovate. Prothorax broader than long, rounded at the sides, gradually and obliquely narrowing from near the base to the subapical constriction, the base moderately bisinuate; coarsely punctate, the punctuation diffuse on the disc, the larger impressions arranged in two or three irregular rows along each side of the subcariniform median line, the disc triangularly depressed posteriorly. Scutellum rather large, transverse. Elytra a little wider than the prothorax, moderately long, subparallel, flattened on the disc; coarsely punctate-striate, the interstices narrow, raised, obsoletely uniseriate-punctate. Ventral segments 1 and 2 broadly depressed down the middle in the ♂.

Length 4–5, breadth $1\frac{1}{10}$ – $1\frac{2}{5}$ millim.

Hab. COSTA RICA, La Uruca 1100 metres (*Biolley*).

Three specimens, similarly coloured. This species resembles the smaller examples of *C. bicolor*, but it has the rufous coloration extending to the abdomen and to near the apex of the elytra; the rostrum narrower at the base and more dilated at the apex, not so coarsely punctate, and unimpressed; and the seriate punctures on the elytra smaller. The flattened upper surface, rufescent elytra, and apically dilated rostrum distinguish *C. circumfusus* from various other allied Central-American forms. *C. hamiltoni*, Slosson, from Florida and Cuba*, is smaller and narrower than the present insect, and has the rostrum relatively narrower at the base, the upper surface less coarsely punctate, &c.

* There is a specimen of this species from Cayamas, Cuba, in the U.S. Nat. Museum.

34. *Cossonus parvicollis*, sp. n. (Tab. III. figg. 7, 7 a.)

Moderately elongate, depressed, shining, nigro-piceous, the elytra with the humeri and lower margins indeterminately rufescent, the tarsi and the base of the antennæ ferruginous. Head small, foveate and punctured between the somewhat prominent eyes, the globose basal portion smooth; rostrum rather more than half the length of the prothorax, quadrangularly dilated at the apex, the basal portion a little longer than the apical, rather sparsely punctate. Prothorax nearly as long as broad, narrow, the sides subparallel at the base and arcuately converging anteriorly to the distinct subapical constriction, the base bisinuate; closely, coarsely punctate, the disc with a shallow excavation and a short longitudinal carina at the base, preceded by a long median sulcus. Scutellum very small. Elytra much wider than the prothorax, subparallel in their basal half, the humeri rounded and not prominent; closely, coarsely crenate-striate, the interstices narrow, raised, minutely uniseriate-punctate.

Length $3\frac{1}{2}$, breadth $1\frac{1}{8}$ millim.

Hab. MEXICO, Guanajuato (*Sallé*).

One specimen. Separable from *C. rufonotatus* by the longer, mesially sulcate, basally carinate, more coarsely punctured prothorax, the minute scutellum, the less prominent humeri, and the less transverse apical portion of the rostrum. The relatively narrow prothorax, broad elytra, with rufous humeral spot, and comparatively small head, render *C. parvicollis* easily recognizable.

35. *Cossonus aterrimus*, sp. n. (Tab. III. figg. 8, 8 a, ♂.)

Moderately elongate, rather convex, shining, the elytra often alutaceous and subopaque, black, the base of the antennæ and the tarsi more or less ferruginous. Head longitudinally foveate, feebly transversely grooved, and punctate between the eyes, the globose basal portion obsoletely punctured, the eyes depressed; rostrum short, stout, transversely, subquadrangularly dilated at the apex, the basal portion longer than the apical, closely punctate, apparently somewhat smoother in the ♀. Prothorax a little broader than long, rather convex, moderately rounded at the sides, narrowed and very feebly constricted in front, deeply bisinuate at the base; coarsely, closely punctate, the punctuation becoming finer and more diffuse on the disc, the latter with a triangular, coarsely rugose, shortly carinate depression at the base, the depression preceded by a few biserially-arranged coarse punctures. Scutellum small. Elytra wider than the prothorax, moderately long, subparallel in their basal half; punctate-striate, the punctures becoming larger and transverse towards the base and fine towards the apex, the interstices faintly uniseriate-punctate, feebly convex, sinuous, narrower, and more raised anteriorly. Ventral segments 1 and 2 hollowed down the middle, and 5 transversely depressed at the apex, in the ♂, 1 and 2 also feebly depressed in the ♀.

Length $3\frac{1}{2}$ –5, breadth $1\frac{1}{8}$ – $1\frac{7}{8}$ millim. (♂ ♀.)

Hab. MEXICO, Toxпам [type] (*Sallé*), Atoyac (*Dugès*), Motzorongo (*Flohr*), Yucatan (*Gaumer*); NICARAGUA, Chontales (*Janson*); COSTA RICA, Irazu, Caché (*Rogers*).

A perplexing insect, with the puncturing of the prothorax and elytra finer than in *C. scrobiculatostratus* and *C. perfidiosus*, and the general facies of the smaller and less convex *C. exaratus*. The various Costa Rican specimens have a long frontal fovea, and the head almost without transverse groove between the eyes; the two from Motzorongo were sent with *C. exaratus*, but they cannot be included under that species, from which they differ in their more depressed eyes, &c. A male from Toxпам is figured.

36. *Cossonus exaratus*.

Cossonus exaratus, Boh. in Schönh. Gen. Curc. iv. p. 1018¹.

Var. *Cossonus rufescens*, Chevr. in litt.²

♂. Ventral segments 1 and 2 broadly excavate down the middle.

Hab. MEXICO^{1 2} (*Truqui*, in coll. *Fry*; *Mus. Brit.*), Toxpam (*Sallé*), Las Vigas (*Höge*), Motzorongo (*Flohr*), Teapa (*H. H. Smith*); GUATEMALA, near the city, Capetillo, Zapote (*Champion*).

A small form, with a deep, oblong frontal fovea, somewhat prominent eyes, a rather small prothorax—which is sharply, longitudinally carinate down the middle of the triangular, rugose, basal excavation and somewhat diffusely punctured on the disc,—and closely crenate-striate elytra, the ventral segments 1 and 2 deeply excavate down the middle in the male. Found in numbers at Guatemala city and Capetillo, the males from these places agreeing with the type (♂) belonging to the Stockholm Museum. The Mexican specimens vary a good deal *inter se*, some of them having the elytra rufescent (*rufescens*, Chevr.) as in typical *C. impressus*.

37. *Cossonus convexiusculus*.

Cossonus convexiusculus, Boh. in Schönh. Gen. Curc. iv. p. 1007¹.

Hab. MEXICO (*Höge*, ex coll. *Solari*), Orizaba (*Mus. Chevrolat*¹).

It is somewhat doubtful if the specimen of this species communicated by Dr. Sjöstedt is the actual "type"; it seems to be a variety of *C. exaratus* with the prothorax more closely punctured on the disc, a little less depressed in the middle at the base, and the short basal carina abbreviated anteriorly. Boheman compared *C. convexiusculus* with the N.-American *C. concinnus**, and in Schönherr's work it is placed in a different section (= *Borophlæus*, Woll.) of the genus from that including *C. exaratus*. A single example given us by Signor Solari agrees very nearly with the Mexican insect (which is not labelled with any definite locality) sent me from Stockholm.

38. *Cossonus purulensis*, sp. n.

Elongate, depressed, shining, black, the base of the antennæ and the tarsi more or less ferruginous. Head finely punctate and feebly foveate between the eyes, the globose basal portion obsolete punctate, the eyes rather prominent; rostrum short, quadrangularly dilated at the apex, the apical and basal portions about equal in length, the latter obsolete canaliculate anteriorly, sparsely, finely punctate. Prothorax slightly broader than long, somewhat rounded at the sides, gradually and obliquely narrowing from near the base, the latter rather feebly bisinuate, the subapical constriction indistinct; sparsely, unequally punctate, the punctures coarse and irregularly distributed on the disc along each side of the smooth median line, the latter flattened and cariniform at the base and limited externally by a short shallow, transverse, rugose space. Scutellum small, transverse. Elytra a little wider than the prothorax, subparallel in their basal half; closely crenate-striate, the interstices straight, obsolete uniseriate-punctate, about as wide as the striæ, and feebly convex. Ventral segment 1 broadly hollowed down the middle in the ♂.

Length $3\frac{1}{2}$ – $3\frac{7}{8}$, breadth 1 – $1\frac{1}{10}$ millim. (♂.)

* *C. concinnus*, Boh., does not appear to have been correctly identified by American authors, to judge from the specimens sent me under that name.

Hab. GUATEMALA, Purula in Vera Paz (*Champion*).

Three specimens, one (♀?) with the ventral depression shallow, the others evidently males. More elongate than *C. duplicatus*, the apical portion of the rostrum broader, the prothorax sparsely, confusedly punctate, with the basal depression reduced to a short transverse space, which is interrupted in the middle by the flattened cariniform extension of the smooth median line. The shallowly impressed disc of the prothorax also separates *C. purulensis* from *C. exaratus*, *C. convexiusculus*, &c. The prothorax is less oblong and more finely punctured than in *C. depressicollis*.

39. *Cossonus impressus*.

Cossonus impressus, Boh. in Schönh. Gen. Curc. iv. p. 1019¹.

♂. Ventral segment 1 or 2 with a faint narrow groove down the middle.

Hab. NORTH AMERICA, Key West and Kissimmee in Florida.—CUBA¹, Cayamas; JAMAICA¹.

Var. Elytra black or piceous.

? *Cossonus impressifrons*, Horn, Proc. Am. Phil. Soc. xiii. p. 440² (nec Boh.).

Hab. NORTH AMERICA, Florida².—MEXICO (*Mus. Brit.*), Toxpam (*Sallé*), Frontera in Tabasco (*Höge*), Temax in N. Yucatan (*Gaumer*); BRITISH HONDURAS, Rio Sarstoon (*Blancaneaux*); GUATEMALA, Cahabon, San Juan, Chacoj, and Sabo in Vera Paz (*Champion*), Trece Aguas (*Barber & Schwarz*, in *U.S. Nat. Mus.*); COSTA RICA, Puntarenas (*Biolley*).

Found in abundance at Puntarenas, Costa Rica, and at Chacoj (La Hamaca) in the Polochic valley, the Central-American specimens differing from those from Florida (sent me by Mr. Barber as *C. impressifrons*, Boh.*) and the Antilles in having the elytra black or piceous. These examples are only separable from *C. exaratus* (which sometimes has the elytra rufescent) by their larger and longer prothorax and the almost obsolete ventral groove in the male. The long series from Puntarenas and Chacoj are separable from *C. exaratus* by the above-mentioned characters, and I have therefore retained the two forms as distinct. Both have a triangular, rugose, carinate excavation at the base of the prothorax.

40. *Cossonus flavovittatus*, sp. n. (Tab. III. figg. 9, 9 a.)

Moderately elongate, depressed, shining, nigro-piceous, the prothorax rufescent, the elytra each with a very broad brownish-yellow vitta extending from the base to near the apex (leaving the suture and outer margins infusate), the antennæ (the fuscous club excepted) and tarsi ferruginous. Head longitudinally foveate and punctured between the eyes, the globose basal portion almost smooth, the eyes large and rather prominent; rostrum more than half the length of the prothorax, curved, strongly, transversely,

* The type of this species was from Pennsylvania. It was said to have the prothorax flat on the disc and obsoletely carinate at the base.

quadrangulately dilated at the apex, the basal portion longer than the apical, rather closely punctate. Prothorax a little broader than long, somewhat feebly bisinuate at the base, the sides subparallel behind and feebly rounded and subobliquely converging forwards to the shallow subapical constriction; coarsely, somewhat closely punctate, except along the smooth median line, which becomes cariniform posteriorly, and is limited on each side by a shallow transverse depression. Scutellum small, subquadrate. Elytra much wider than the prothorax, moderately long, parallel; closely crenate-striate, the interstices about as wide as the striae, almost flat, minutely uniseriate-punctate. Beneath rather sparsely punctate; ventral segments 1 and 2 excavate down the middle.

Length $4\frac{1}{2}$, breadth $1\frac{1}{2}$ millim. (σ .)

Hab. GUATEMALA, Volcan de Agua 8500–10,500 feet (*Champion*).

Two males, probably found under bark of deciduous trees, which cease at about an elevation of 8000 feet, and are there replaced by pines. This insect has the elytra flavo-vittate, as in *C. bivittatus*, but the prothorax is rufescent, faintly impressed at the base, and wants the large polished spaces on the disc, the rostrum is closely punctate, and the elytra are not so coarsely crenate-striate. The Colombian *C. vittatus*, Kirsch, is a more elongate form.

41. *Cossonus segnis*. (Tab. III. figg. 10, 10 a, σ .)

Cossonus segnis, Faust, Stett. ent. Zeit. 1896, p. 134¹.

Cossonus antiquus, Dej. in litt.².

Cossonus curvatostratus, Chevr. in litt.³.

Elongate, rather convex, shining, black, the tips of the tarsi ferruginous. Head deeply foveate and transversely grooved between the eyes, the globose basal portion smooth, the eyes depressed; rostrum curved, stout, abruptly, quadrangulately dilated at the apex, with the narrow basal portion compressed and longer than the apical, shining or opaque, closely, finely punctate, and smoother or obsoletely carinate down the middle. Prothorax a little broader than long, arcuately narrowing anteriorly, feebly constricted in front, and deeply bisinuate at the base; the disc with a transverse, subtriangular, very coarsely punctured, depressed space at the base (which sometimes has a short carina behind), preceded by a broad, outwardly-widened, almost smooth or faintly punctate area, the rest of the surface coarsely punctured. Scutellum small. Elytra long, parallel, considerably wider than the prothorax, transversely depressed below the base; coarsely, subsinuately, seriate-punctate, the punctures becoming much coarser towards the base and fine towards the apex, the interstices smooth, almost flat, sometimes raised anteriorly. Beneath rather closely punctate; ventral segment 1 unimpressed, and 5 with a deep transverse fovea, in the σ .

Length $5\frac{1}{2}$ – $7\frac{1}{2}$, breadth $1\frac{3}{8}$ – $2\frac{3}{8}$ millim. (σ & η .)

Hab. COSTA RICA, Irazu (*Rogers*), La Palma and Tarbaca 1600–1700 metres (*Biolley*: σ & η).—COLOMBIA; VENEZUELA, Colonia Tovar¹; ECUADOR; BRAZIL, Rio Janeiro; PERU¹.

This species seems to be known in collections under the above-quoted MS. names. Amongst the eight specimens seen from Costa Rica, several have a deep fovea on the fifth ventral segment, and these are assumed to be males. The present insect has an almost smooth space extending across the middle of the prothorax, and the very coarsely punctured transverse depression at its base is somewhat rounded anteriorly. The Costa Rican examples differ from the type, and from others before me from South America, in having the rostrum opaque or subopaque and obsoletely carinate.

42. *Cossonus bifoveatus*, sp. n. (Tab. III. figg. 11, 11 a.)

Elongate, depressed above, shining, black, the base of the antennæ and the tarsi in part ferruginous, the rest of the legs and the elytra sometimes piceous. Head longitudinally foveate, transversely grooved, and punctate between the eyes, the globose basal portion almost smooth, the eyes large and not prominent; rostrum feebly curved, rather short, narrow at the base, broadly, abruptly, subquadrangulately dilated at the apex, densely punctate; antennal club large, ovate. Prothorax broader than long, moderately rounded at the sides, narrowed and feebly constricted in front, deeply bisinuate at the base; with a deep, rugose, subtriangular excavation at the base (in the centre of which is a short basal carina) preceded by a small, shallow, oval, coarsely punctured depression, the two depressions more or less connected and limited exteriorly by a large, oblique, polished, faintly punctate space, the sides very coarsely, closely punctate. Scutellum small. Elytra a little wider than the prothorax, subparallel, flattened on the disc; moderately coarsely crenate-striate, the punctures closely placed, the interstices feebly convex, narrow, sinuate at the base, and minutely uniseriate-punctate. Beneath closely punctate; ventral segment 1 depressed down the middle in the ♂.

Length $4\frac{1}{10}$ – $5\frac{1}{5}$, breadth $1\frac{2}{5}$ –2 millim.

Hab. GUATEMALA, Cahabon in Alta Vera Paz [type] (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Volcan de Chiriqui (*Champion*).—COLOMBIA, Santa Marta (*coll. Fry*).

Six specimens. A somewhat depressed form related to *C. foveatus*, with the rostrum narrow at the base, abruptly dilated at the apex, and densely punctate, the polished spaces on the disc of the prothorax well-defined, the seriate punctures of the elytra closely packed. Less convex than *C. scrobiculatostratus* and *C. perfidiosus*, the prothorax with more distinct polished spaces on the disc.

43. *Cossonus foveatus*. (Tab. III. figg. 12, 12 a, ♀; 13, var. *lebasii*, ♂.)

Cossonus foveatus, Boh. in Schönh. Gen. Curc. iv. p. 1026¹.

Hab. MEXICO (*Mus. Brit.*), Orizaba¹ (*Mus. Holm.*), Toxpan (*Sallé*), Cordova (*Höge*); BRITISH HONDURAS, Rio Sarstoon (*Blancaneaux*); GUATEMALA, Capetillo (*Champion*); NICARAGUA, Chontales (*Belt*); COSTA RICA, Valle de Baru (*Pittier*), Monte Retondo (*Underwood*), La Palma, Tablazo, Surubres (*Biolley*), Irazu (*Rogers*).—ECUADOR (*coll. Fry*).

Var. Smaller, the rostrum a little shorter; the elytra (the suture and margins, and sometimes a space across the middle, excepted) often rufescent or ruf-piceous, or with a reddish spot near the apex, sometimes wholly black.

Cossonus lebasii, Boh. loc. cit. p. 1029²; viii. 2, p. 272³.

Hab. MEXICO, Tehuantepec (*Höge*); GUATEMALA, Trece Aguas (*Schwarz & Barber*), Puerto Barrios (*C. C. Deam, in U.S. Nat. Mus.*); NICARAGUA, Grenada (*Sallé*), Chontales (*Belt*).—COLOMBIA³, Carthagena²; VENEZUELA, Caracas³; TRINIDAD.

The long series of specimens from Nicaragua and Costa Rica connect the Mexican *C. foveatus* with the Colombian *C. lebasii* (the types of both of which I have seen), and they cannot be maintained as distinct. The rostrum in this insect is comparatively smooth, rather long, and abruptly, quadrangulately dilated at the tip, the antennæ

being inserted beyond the middle; the head is abruptly constricted and smooth behind the eyes, which are depressed; the prothorax has a very deep, rugose, triangular excavation at the base, preceded by two irregular rows of coarse punctures, limited outwards by a broad impunctate space. The ventral segments 1 and 2 are narrowly sulcate down the middle in the male. The sides of the prothorax are reddish in some of the southern specimens with rufescent elytra. The length varies from $3\frac{1}{2}$ –6 mm.

44. **Cossonus punctifrons.** (Tab. III. figg. 14, 14 a, ♂.)

Cossonus punctifrons, Boh. in Schönh. Gen. Curc. iv. p. 1027¹.

? *Cossonus mexicanus*, Dej. Cat.².

Hab. MEXICO², Orizaba¹ (*Mus. Holm.*).

This species (the unique type of which is here figured) has the prothorax sculptured and excavate much as in *C. foveatus*; but the rostrum is extremely short, closely punctate, and abruptly, transversely, subquadrangularly dilated at the tip, the eyes are more prominent, the elytral interstices are flat, and the ventral depression of the male is much broader. The prominent eyes and the very short rostrum also separate *C. punctifrons* from *C. bifoventus*; and the more depressed, broader form, the larger, polished, faintly punctured spaces on the disc of the prothorax, and the shorter abruptly dilated rostrum, distinguish it from *C. evanescens*.

45. **Cossonus irregularis**, sp. n. (Tab. III. figg. 15, 15 a, ♂.)

Moderately elongate, rather convex, shining, black, the antennæ (the club excepted) and tarsi obscure ferruginous. Head foveate and finely punctate between the eyes, the globose basal portion smooth, the eyes not prominent; rostrum short, gradually widening to the feebly, quadrangularly dilated apical portion, the two portions about equal in length, shining, sparsely, finely punctate, without trace of median ridge or depression. Prothorax almost as long as broad, moderately rounded at the sides, obliquely narrowing forwards, the subapical constriction almost obliterated, the base bisinuate; very coarsely punctate at the sides and down the middle, and with a polished, faintly punctate space on each side of the elongate, triangular, median depression, the latter terminating posteriorly in a deep, rugose, interruptedly carinate area, the punctures preceding this foveiform and arranged in an irregular double or treble series. Scutellum very small, transverse. Elytra moderately long, a little wider than the prothorax, subparallel in their basal half; coarsely punctate-striate, the interstices about as wide as the striæ, faintly uniseriate-punctate, the inner ones sinuous and somewhat raised towards the base.

Ventral segments 1 and 2 narrowly sulcate down the middle in the ♂.

Length $4\frac{1}{8}$, breadth $1\frac{1}{4}$ millim. (♂.)

Hab. GUATEMALA, San Gerónimo in Baja Vera Paz (*Champion*).

Two males. Very like *C. punctifrons*, Boh. (♂), but narrower and more convex, the rostrum much less widened at the apex and more finely punctured, the eyes less prominent, the prothorax not so deeply sinuate at the base, the ventral excavation narrower. Less elongate than *C. convexicollis* (specimens of which occur with small polished spaces on the prothorax), the punctuation of the upper surface not so coarse, the prothorax shorter, the rostrum less dilated at the tip. The rostrum is much shorter than in *C. foveatus* and *C. bifoventus*.

46. *Cossonus ocularis*, sp. n. (Tab. III. fig. 16, ♂.)

Elongate, rather convex, very shining, black, the base of the antennæ and the tarsi ferruginous. Head feebly, narrowly foveate and finely punctate between the very large, depressed eyes, the globose basal portion smooth; rostrum short, convex, rather stout, gradually widening to the transverse, sub-quadrangular apical portion, sparsely, finely punctate; antennæ with a rather slender funiculus and a large, ovate club. Prothorax nearly as long as broad, the sides parallel at the base and obliquely converging anteriorly to the almost obsolete subapical constriction, the base deeply bisinuate; the disc with a subcarinate, irregularly biseriate-punctate, elongate-triangular depression, which becomes rugose and deeper at the base, and is bordered externally by a broad polished space, the sides closely, moderately coarsely punctate. Scutellum very small, transverse. Elytra considerably wider than the prothorax, moderately long, parallel; punctate-striate, the punctures not very closely placed and becoming much finer towards the apex, the interstices smooth, flat, as broad as the striæ. Metasternum and abdomen very sparsely, finely punctate, the ventral segments 1 and 2 narrowly and deeply excavate down the middle.

Length $4\frac{1}{2}$, breadth $1\frac{2}{5}$ millim. (♂.)

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

One specimen. A narrow, parallel-sided, somewhat convex form, approaching *C. foveatus*, but with the rostrum shorter, the eyes larger, the prothorax more oblong, not so coarsely punctate laterally, and with the basal depression shallower, &c.

47. *Cossonus ligniperdus*. (Tab. III. fig. 17.)

Cossonus ligniperdus, Boh. in Schönh. Gen. Curc. iv. p. 1028¹.

Hab. MEXICO (*Höge, ex coll. Solari*), Orizaba (*Mus. Chevrolat*¹).

Larger and more elongate than *C. exaratus*; the rostrum shorter and broader, abruptly dilated at the apex, and closely punctate; the frontal fovea deep; the prothorax coarsely, irregularly biseriate-foveate down the middle, the triangular excavation carinate at the base, deep, and extending forwards to near the apex, the disc with an almost smooth space on each side of the excavation; the elytra depressed on the disc and closely crenate-striate. We are indebted to Signor Solari for a specimen nearly agreeing with the Orizaba type (fig. 17) communicated by Dr. Sjöstedt.

48. *Cossonus duplicatus*, sp. n. (Tab. III. fig. 18, ♂.)

Moderately elongate, depressed, shining, black or piceous (immature), the base of the antennæ and the tarsi more or less ferruginous. Head longitudinally foveate and sparsely punctured between the eyes, the globose basal portion smooth, the eyes rather prominent; rostrum short, feebly, transversely, sub-quadrangularly dilated at the apex, closely, finely punctate. Prothorax slightly broader than long, moderately rounded at the sides, narrowed and constricted in front, somewhat feebly bisinuate at the base; the disc with a shallow, triangular, subcarinate, irregularly biseriate-punctate depression extending along the middle to the subapical transverse groove, the depression limited externally by a finely and sparsely punctured (in one specimen almost polished) space, the punctuation becoming closer and much coarser along the sides and flanks. Scutellum very small, transverse. Elytra a little wider than the prothorax, subparallel in their basal half; closely punctate-striate, the interstices obsoletely uniseriate-punctate, flat, becoming feebly convex anteriorly. Beneath with a broad space down the middle finely and sparsely, the sides and the prothorax more coarsely and closely, punctate; ventral segments 1 and 2 depressed down the centre in the ♂.

Length $2\frac{3}{4}$ – $3\frac{1}{2}$, breadth $\frac{5}{8}$ – $1\frac{1}{10}$ millim. (♂ ♀.)

Hab. MEXICO, Toxpam (*Sallé*: var.); GUATEMALA, Senahu and San Juan [type] in Alta Vera Paz (*Champion*), Cacao near Trece Aguas (*Schwarz & Barber, in U.S. Nat. Mus.*).

Sixteen specimens, all but one from the vicinity of the Polochic Valley. A small depressed form resembling *C. exaratus* and *C. convexiusculus*, with a long, shallow, triangular, biseriate-punctate, subcarinate depression extending down the disc of the prothorax, and the depression limited externally by a broad, finely and sparsely punctured space, the ventral surface (the sides and prothorax excepted) also very finely punctate. Smaller, flatter, and less coarsely punctured than *C. ligniperdus*, the prothorax with a smooth cariniform median line, the rostrum a little longer and less dilated at the apex. In one of the four examples from Senahu the seriate punctures on the prothorax are large and the space exterior to them is almost impunctate. The one from Mexico has the puncturing of the prothorax altogether coarser, but it seems to belong to the same species.

49. **Cossonus canaliculatus.** (Tab. III. figg. 19, 19 a.)

Curculio canaliculatus, Fabr. Ent. Syst. i. 2, p. 471 (1792)¹.

Hylesinus canaliculatus, Fabr. Syst. Eleuth. ii. p. 395 (1801)² (nec *Cossonus canaliculatus*, Fabr. Syst. Eleuth. ii. p. 496, and Boh. in Schönh. Gen. Curc. iv. p. 1023, from Sumatra and Java).

Cossonus vulneratus, Illiger, Mag. iv. pp. 131, 149 (1805)³; Rosensch. in Schönh. Gen. Curc. iv. p. 1030⁴; viii. 2, p. 272⁵.

♂. Ventral segments 1 and 2 deeply excavate down the middle.

Hab. MEXICO, Acapulco, Mexico city, Cordova, Jalapa, Las Vigas (*Höge*), Vera Cruz (*Sallé*), Teapa (*H. H. Smith*); GUATEMALA, El Reposo, Capetillo, San Gerónimo (*Champion*); COSTA RICA, Puntarenas (*Biolley*); PANAMA, Volcan de Chiriqui (*Champion*).—COLOMBIA, Carthagen⁶; TRINIDAD (*coll. Fry*); ANTILLES^{1,2}, Puerto Rico.

This is a small, rather convex, moderately elongate species (said by Rosensch. to be of the size of the Palearctic *Rhizophagus bipustulatus*), with a short, feebly quadrangularly dilated rostrum, a canaliculate frons, rather prominent eyes, an oblong prothorax—which is irregularly biseriato-foveate and triangularly depressed down the middle, the depression terminating posteriorly in a deep, triangular, rugose, carinate area, and limited externally by a long polished space,—and rather short, closely crenate-striate elytra. The ventral segments 1 and 2 are deeply excavate along the middle in the male, as in *C. exaratus*. It is not clear why the name *C. vulneratus* is used for this American species in Schönherr's work*.

50. **Cossonus evanescens**, sp. n. (Tab. III. figg. 20, 20 a.)

Elongate, narrow, cylindrical, rather convex, shining, black, the base of the antennæ, and the tarsi in part, ferruginous. Head foveate and finely punctate between the eyes, the globose basal portion almost

* The name *illigeri* is suggested for the eastern form.

smooth, the eyes not prominent; rostrum short, feebly, transversely, subquadrangularly dilated at the apex, finely, somewhat closely punctate; antennal club large. Prothorax about as long as broad, oblong-subquadrate, feebly constricted and arcuately narrowed in front, and also narrowed at the base, the latter deeply bisinuate; the disc with an elongate-triangular, irregularly biseriato-foveate, carinate depression extending from the base to near the apex (the smooth median line limited on each side posteriorly by a deep, triangular, rugose area), the depression limited externally by a polished, almost impunctate space, the outer margins and flanks coarsely, closely punctate. Scutellum small. Elytra elongate, scarcely wider than the prothorax, subparallel; punctate-striate, the punctures becoming rather coarse and crenate towards the base and fine towards the apex, the interstices broader than the striae, flat, slightly raised anteriorly. Tibiæ broad.

Length 4, breadth $\frac{1}{10}$ millim.

Hab. PANAMA, Volcan de Chiriqui 4000 feet (*Champion*).

One specimen. A long, narrow, cylindrical form, with an elongate-triangular, biseriato-foveate, carinate excavation on the prothorax, limited externally by an ill-defined polished space, and the punctured striae of the elytra becoming very much finer towards the apex. *C. evanescens* approaches *C. ligniperdus*, but the latter is less convex and has the elytra more coarsely punctate-striate throughout.

51. *Cossonus nitidicollis*, sp. n. (Tab. III. figg. 21, 21 a.)

Elongate, narrow, flattened on the disc, very shining, black or nigro-piceous, the base of the antennæ, the tarsi, and sometimes the tibiæ also, ferruginous. Head foveate and transversely grooved between the somewhat convex eyes, the globose basal portion and the interocular space almost smooth; rostrum rather convex, curved, quadrangularly dilated at the apex, the narrow basal portion a little longer than the apical, and almost smooth. Prothorax about as long as broad, subquadrate, narrowed and very feebly constricted in front, moderately bisinuate at the base; the disc with a very deep, sharply-defined, rugosely punctate, shortly carinate area at the base, and an abbreviated single or double row of coarse punctures between it and the apex, the rest of the dorsal surface polished and almost impunctate, the flanks coarsely punctured. Scutellum small. Elytra moderately long, subparallel, a little wider than the prothorax; seriate-punctate, the punctures becoming coarser and arranged in sinuous lines towards the base and fine towards the apex, the interstices smooth, flat, broad on the disc, narrow at the sides.

Length 3-3 $\frac{3}{8}$, breadth $\frac{1}{3}$ -1 $\frac{1}{10}$ millim.

Hab. MEXICO (*Mus. Brit.*), Jalapa (*Höge*); GUATEMALA, San Gerónimo (*Champion*); COSTA RICA, Caché (*Rogers*), La Uruca 1100 metres (*Biolley*).

Eight examples, one of which has done duty for *C. foveatus* for many years in the British Museum. A small, narrow, somewhat depressed form related to *C. foveatus*, with the entire disc of the prothorax (the very deep triangular basal fovea and a few coarse punctures preceding it excepted) polished, the elytra with rows of scattered punctures and flat interstices. An allied undescribed species (*C. scrobicollis*, Chevr., *mactatus*, Jekel) occurs at Caracas. A Costa-Rican specimen is figured.

52. *Cossonus bigeminatus*, sp. n. (Tab. III. figg. 22, 22 a.)

Moderately elongate, depressed, shining, black or piceous, the elytra (the suture, or the suture, sides, and apex, excepted), and sometimes a space down the middle of the prothorax, rufo-castaneous, the base of the antennæ, and in one specimen the legs also, ferruginous. Head foveate and sparsely punctate between the rather prominent eyes, the globose basal portion almost smooth; rostrum short, curved, convex, abruptly subquadrangularly dilated at the apex, sparsely finely punctate. Prothorax transversely sub-

quadrate, abruptly constricted in front, bisinuate at the base, the sides more or less compressed at the middle and rounded anteriorly; the disc broadly, subtriangularly depressed down the centre from the transverse subapical groove to the base, and with an irregular, double, longitudinal row of coarse punctures on each side of the smooth median line, the rest of the surface with minute, widely scattered punctures, which become coarser and closer along the outer margin. Scutellum smooth, flat, rather large. Elytra a little wider than the prothorax, flattened, subparallel; closely and regularly crenate-striate, the interstices narrow, feebly convex, and obsoletely uniseriate-punctate.

Length $3\frac{1}{2}$ – $4\frac{1}{3}$, breadth $1\frac{1}{10}$ – $1\frac{1}{3}$ millim.

Hab. MEXICO, Toxpam in Vera Cruz (*Sallé*); GUATEMALA, Cahabon and Panima in Vera Paz, Zapote (*Champion*).

Six specimens. A flattened form approaching the widely-distributed *C. thoracicus*, Boh., with the globose portion of the head abruptly separated from the anterior portion, the rostrum longer and more constricted at the base, the two double rows of coarse punctures on the disc of the prothorax less oblique, the scutellum a little smaller, and the elytra (except along the sides and suture) more or less rufescent.

53. **Cossonus bivittatus**, sp. n. (Tab. III. figg. 23, 23 a.)

Moderately elongate, depressed, very shining, black, the elytra each with an extremely broad brownish-yellow vitta extending from the base to near the apex (leaving the suture and outer margins black), the base of the antennæ and the tarsi ferruginous. Head narrowly foveate and obsoletely punctate between the eyes, the globose basal portion smooth; rostrum more than half the length of the prothorax, rather convex, transversely, subquadrangularly, and abruptly dilated at the apex, the narrow basal portion a little longer than the apical, sparsely, obsoletely punctate. Prothorax broader than long, rounded at the sides anteriorly, narrowed and constricted in front, moderately bisinuate at the base; the disc with an elongate, triangular depression extending from the base to the shallow, transverse, subapical groove, the depression divided down the middle by a rather broad, smooth, uninterrupted, cariniform ridge, which is limited on each side anteriorly by a few irregularly-distributed coarse punctures, and posteriorly by an oblong, deep, rugose area, the rest of the surface almost smooth to near the coarsely punctured outer margins. Scutellum strongly transverse, smooth. Elytra moderately long, much wider than the prothorax, subparallel; coarsely crenate-striate, the punctures well separated one from another, the interstices somewhat convex, almost smooth, rather broad on the disc, narrow at the sides.

Length $4\frac{2}{5}$, breadth $1\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 8000 feet (*Champion*).

One specimen. A remarkably distinct species, with broadly ochreo-vittate elytra and a relatively narrow prothorax, the latter with a median ridge and a broad longitudinal space on the outer part of the disc almost smooth, and two deep, oblong, rugose foveæ at the base. *C. vittatus*, Kirsch, from Bogota, the type of which I have seen, is somewhat similarly marked.

54. **Cossonus thoracicus**. (Tab. III. figg. 24, 24 a.)

Cossonus thoracicus, Boh. in Schönh. Gen. Curc. iv. p. 1032 (nec Pasc. *)¹.

Hab. MEXICO (*Mus. Brit.*; *Höge*, in coll. *Solari*), Orizaba¹ (*Mus. Holm.*), Toxpam (*Sallé*), Tuxtla (*Barrett*, in *U.S. Nat. Mus.*); GUATEMALA, Sabo, Chacoj, and Cahabon in Vera Paz, Zapote (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*), Tabernilla,

* *C. thoracicus*, Pasc. Ann. Mus. Genova, (2) p. 313 (1885), from New Guinea, requires a new name.

Canal Zone (*Busck, in U.S. Nat. Mus.*).—COLOMBIA (*coll. Janson*); ECUADOR; BRAZIL; ANTILLES, St. Vincent (*H. H. Smith*).

A rather small, moderately elongate, depressed form, with the rostrum broad, very short, apically dilated, finely punctate; the eyes somewhat prominent; the head exserted, with the basal portion continuous with the front and constricted at the sides only at some little distance behind the eyes, sometimes feebly foveate between them; the prothorax broader than long, bisinuate at the base, abruptly constricted anteriorly, triangularly, longitudinally depressed on the disc, the depression large and with an oblique irregular double series of coarse punctures on each side extending forwards to the transverse, sinuous, subapical groove and there confluent (the intervening space sometimes with a few additional impressions), the rest of the surface to near the outer margin very sparsely minutely punctured; the scutellum rather large, flat; the elytra flat on the disc, coarsely crenate-striate. A variety occurs at Chimbo, Ecuador, with the disc of each elytron rufescent. The length varies from $3\frac{1}{2}$ – $4\frac{4}{5}$ mm.

55. **Cossonus marcidus**, sp. n. (Tab. III. fig. 25.)

Moderately elongate, depressed, shining, black or pieceous (immature). Head exserted, feebly constricted at the sides behind the rather prominent eyes, the front continuous with the vertex, closely punctate, without trace of fovea; rostrum very short, about as broad as long, transversely dilated at the apex, closely punctate. Prothorax a little broader than long, rounded-subquadrate, constricted and much narrowed in front, feebly bisinuate at the base; the disc broadly, subtriangularly flattened or depressed from the transverse, sinuous subapical groove to the base, the flattened space (except along the smooth median line) closely, coarsely, irregularly punctate, the rest of the surface exterior to it very finely and sparsely punctured, the punctuation becoming coarser and closer again along the outer margin and flanks. Scutellum rather large, flat, smooth. Elytra moderately long, slightly wider than the prothorax, subparallel, flattened; punctate-striate, the interstices flat, those on the disc broader than the striæ, minutely uniseriate-punctate.

Length 3 – $3\frac{4}{5}$, breadth 1 – $1\frac{1}{5}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

Five specimens. This is a form of *C. thoracicus* with the larger punctures on the flattened central portion of the prothorax reduced in size, confusedly arranged, and somewhat closely placed; the elytra more finely punctate-striate, with the dorsal interstices broader than the striæ; the rostrum very short and closely punctate. Amongst the long series of *C. thoracicus* before me from Central and South America and the Antilles there is nothing intermediate between these two forms.

56. **Cossonus catolethroides**, sp. n. (Tab. III. figg. 26, 26 a.)

Elongate, depressed, shining, nigro-piceous, the sides of the elytra indeterminately, the apical half of the rostrum, the antennæ (the club excepted), and tarsi rufescent. Head very sparsely punctate, foveate between the prominent eyes, the globose basal portion separated from the rest by a transverse groove; rostrum feebly curved, cylindric, about two-thirds the length of the prothorax, very sparsely, finely punctate; antennal club large. Prothorax nearly as long as broad, gradually narrowing from a little before the base to the short tubulate apical portion, the base feebly bisinuate; rather sparsely, irregularly

punctate, the disc slightly depressed down the middle posteriorly. Scutellum large, flat, rounded, finely alutaceous, impunctate. Elytra broadly flattened, much wider than the prothorax, subparallel in their basal half and rapidly narrowing thence to the apex, the apices conjointly rounded; shallowly crenato-sulcate, the punctures not very coarse and somewhat distant one from another, the interstices feebly transversely rugulose, almost flat and broader than the sulci on the disc, convex at the sides and apex. Beneath sparsely, finely punctate; metasternum transversely depressed posteriorly and with a fine median groove; ventral segments 1 and 2 broadly depressed down the middle; tarsal claws small.

Length $3\frac{2}{5}$, breadth $1\frac{1}{10}$ millim. (♂.)

Hab. GUATEMALA, Purula in Vera Paz (*Champion*).

One male. The elytra in this insect are coloured very much as in *Catolethrus longulus*. It has a rather long, cylindrical rostrum, an almost unimpressed prothorax, a large scutellum, small tarsal claws, &c., and may have to be removed from the genus *Cossonus*.

57. *Cossonus convexirostris*, sp. n. (Tab. III. figg. 27, 27 a.)

Moderately elongate, depressed, shining, nigro-piceous or black, the antennæ (the fuscous club excepted), tarsi, and sometimes the tibiæ and the tip of the rostrum also, ferruginous. Head longitudinally foveate and coarsely punctured between the eyes, the globose basal portion almost smooth, the eyes depressed; rostrum short, moderately stout, parallel-sided, convex, sparsely punctate, the apical half smoother, the antennæ inserted at the middle. Prothorax a little broader than long, feebly bisinuate at the base, very gradually and obliquely narrowing from about the basal third or fourth to the shallow subapical constriction; coarsely, closely, unequally punctate, except along the narrow, smooth, more or less cariniform space extending down the middle posteriorly, the basal depression very shallow and sub-triangular. Scutellum small, transverse. Elytra slightly wider than the prothorax, moderately long, parallel; coarsely crenate-striate, the interstices narrow, raised, and each with a row of scattered minute punctures. Beneath coarsely punctate; first ventral segment excavate down the middle in the ♂.

Length 3–4 $\frac{2}{3}$, breadth 1–1 $\frac{1}{2}$ millim.

Hab. MEXICO, Jalapa (*Höge*). Toxpam (*Sallé*); GUATEMALA, Zapote and Dueñas (*Champion*).

Found in numbers in Guatemala, in the vicinity of the Volcan de Fuego. This species has the rostrum formed much as in *C. hubbardi*, Schwarz, and *C. latus*, Boh., ♀, differing from the former in its less coarsely sculptured surface, and from the latter in its much smaller size, the very shallow basal fovea of the prothorax, &c. Two of the males from Zapote are larger and more robust than the rest and have the head very coarsely punctured between the eyes. *C. puncticollis*, Boh. (nec Woll.) (*antèa*, p. 46), may be an allied form. *C. hubbardi* lives in the rotting trunks of the giant Cactus (*Cereus giganteus*) in Arizona*.

58. *Cossonus spathula*. (Tab. III. figg. 28, 28 a.)

Cossonus spathula, Boh. in Schönh. Gen. Curc. iv. p. 1035¹; Faust, Stett. ent. Zeit. 1896, p. 133².

Hab. MEXICO, Tapachula in Chiapas (*Höge*), Temax in N. Yucatan (*Gaumer*); BRITISH HONDURAS, Belize (*Blancaneaux*); PANAMA (*coll. Fry*).—VENEZUELA, San Esteban²; BRAZIL, Goyas (*Mus. Brit.*); ANTILLES, Cuba¹, Jamaica, Grenada (*H. H. Smith*).

* Cf. Psyche, 1899, Suppl. pp. 1–14.

Found in numbers by Höge at Tapachula, in the Pacific-coast region, and apparently a common insect in the island of Grenada. The nearest allies of this remarkable species are *C. abscissus* and *C. torridus*, Boh., from Caffraria and Senegal respectively.

Sect. RHYNCOLIDES.

Rhyncolini, Leconte.

Under this section are placed the various genera resembling *Hylastes* (one of which, *Tomolips*, has a 5-jointed funiculus), *Macrancylodes*, and *Rhyncolus*; but the Central-American representatives of the latter are doubtfully congeneric with the type, an insect attacking Conifers.

RHYNCOLUS.

Rhyncolus, Germar, Ins. Spec. nov. p. 307 (1824); Schönherr, Gen. Curc. iv. p. 1056; Wollaston, Trans. Ent. Soc. Lond. 1873, pp. 439, 498, 585, 645; Horn, Proc. Am. Phil. Soc. xiii. pp. 436, 444; Leconte, op. cit. xv. p. 341.

The various American species referred to this genus, the type of which is the Palæarctic *R. ater*, L. (= *chloropus*, F.), require a thorough revision. Of the three Central-American forms here provisionally included in it, *R. elumbis*, Boh. (= *fusiformis*, Woll.), and the insects described below under the names *R. chiriquensis* and *R. montivagus*, would perhaps be better placed in *Stenancylus*, Casey*, their more approximate anterior coxæ notwithstanding†; the fourth, *R. lauri*, Gyll., is unknown to me. These very small, narrow, elongate forms approach *Macrancylus*, Lec. (*Haloxenus*, Perkins)‡, and *Rhamphocolus*, Casey, both of which have a basally widened rostrum, &c. *R. protractus*, Horn, a species found under oak-bark in California, incorrectly referred to *Macrorhyncolus*, Woll., by Leconte, is also not unlike *R. elumbis* and *Stenancylus colomboi*.

1. *Rhyncolus elumbis*. (Tab. III. fig. 29.)

Rhyncolus elumbis, Boh. in Schönh. Gen. Curc. iv. p. 1062¹.

Rhyncolus fusiformis, Woll. Trans. Ent. Soc. Lond. 1873, p. 647².

Hab. MEXICO, Jalapa (*Höge*), Motzorongo (*Flohr*), Teapa (*H. H. Smith*); GUATEMALA, Senahu and San Juan in Alta Vera Paz, Las Mercedes, El Reposo, El Tumbador, Cerro Zunil (*Champion*), Cacao near Trece Aguas (*Schwarz & Barber, in U.S. Nat. Mus.*).—COLOMBIA, Remedios¹; BRAZIL, Bahia and Rio Janeiro²; CUBA, Cayamas (*Schwarz, in U.S. Nat. Mus.*); GRENADA (*Mus. Brit.*).

* Ann. New York Acad. Sci. vi. p. 693 (1892). Type, *S. colomboi*, Casey. Specimens of this species from Cayamas, Cuba, and Jamaica have been sent me by the U.S. Nat. Mus. for determination, with co-types from Jupiter and Biscayne Bay, Florida. Mr. H. H. Smith has also taken it in St. Vincent.

† A variable character in *Pentarthrum*.

‡ *M. linearis*, Lec. (= *H. immigrans*, Perk.), lives on the sea-shore; it occurs in Florida, the West Indies (Mustique I., Grenadines, and Grenada), and the Hawaiian Is. *Eutornus littoralis*, Broun, from New Zealand, is a very similar form.

The numerous specimens identified as this species vary greatly in size and colour, and to a certain extent in the intensity of the punctuation of the prothorax and elytra; but they are always smoother than *Stenancylus colomboi*, Casey (which appears to be constantly ferruginous or rufo-piceous), and have the anterior coxæ more approximate. Both these insects have prominent eyes, the rostrum not widened towards the base, and the elytra narrowly explanate and separately rounded at the apex. The Central-American examples of *R. elumbis*, about half of which are from Trece Aguas, are sometimes wholly or partly black: two of them (from El Reposo and Las Mercedes) are more elongate than the rest and have (as described by Boheman) the elytra very little wider than the prothorax at the base; two others (from Senahu and Trece Aguas) want the subapical prothoracic constriction. The length (includ. rostr.) varies from $2-2\frac{3}{4}$ mm. Wollaston's types of *R. fusiformis* (five from Brazil) are larger than those obtained from within our limits. Boheman compares his *R. elumbis* with *Rhizophagus bipustulatus*.

2. *Rhyncolus chiriquensis*, sp. n. (Tab. III. fig. 30, ♂.)

Elongate, narrow, rather convex, subfusiform, shining, piceous. Head closely punctate, the globose basal portion almost smooth, the eyes rounded, prominent, and coarsely faceted; rostrum broad, short, about as long as the exposed portion of the head, distinctly widened above the points of insertion of the antennæ (appearing a little narrowed at the base). Prothorax considerably longer than broad, subovate, strongly constricted near the apex, truncate and feebly margined at the base; closely, finely punctate, except along a narrow, incomplete, alutaceous median line. Scutellum very small, narrow. Elytra moderately long, less than twice the length of, and about the same width as, the prothorax, produced, separately rounded, and narrowly explanate at the apex; shallowly punctate-striate, the punctures becoming very fine towards the sides and apex, the interstices flat, finely alutaceous, and obsoletely uniseriate-punctate. Beneath somewhat closely punctate; first ventral segment transversely depressed at about the middle. Anterior coxæ narrowly separated. Tibiæ sharply mucronate at the inner apical angle. Tarsi rather stout, the third joint feebly bilobed.

Length $3\frac{2}{5}$, breadth $\frac{4}{5}$ millim. (♂.)

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

One specimen. Larger, longer, and more convex than *R. elumbis*, with the smoother globose portion of the head more distinctly separated from the anterior portion, the rostrum a little longer, the prothorax longer than broad, oblong-oval (not conico-cylindric), and strongly constricted in front, the tarsi stouter.

3. *Rhyncolus montivagus*, sp. n.

Elongate, subfusiform, piceous, shining. Head finely, rather sparsely punctate, the globose basal portion almost smooth, the eyes prominent; rostrum broad, very little longer than wide, slightly tumid above the points of insertion of the antennæ, finely punctate. Prothorax a little longer than broad, subovate, feebly constricted near the apex, closely punctate. Elytra considerably wider than the prothorax, moderately long, produced at the apex; rather coarsely punctate-atriate throughout, the interstices convex, obsoletely uniseriate-punctate.

Length $3\frac{1}{4}-3\frac{1}{2}$, breadth $\frac{7}{8}-\frac{9}{10}$ millim.

Hab. PANAMA, Volcan de Chiriqui 8000 feet (*Champion*).

Three specimens, found under bark in the bamboo-thickets on the Pacific slope of the Volcan de Chiriqui, at the highest elevation reached by the present writer. A close ally of *R. chiriquensis*, but differing from it in having the rostrum slightly broader at the base, the head more sparsely punctured between the eyes, the prothorax less elongate and feebly constricted near the apex, and the elytra relatively broader, more deeply punctate-striate, and with the interstices convex.

4. *Rhyncolus lauri*.

Rhyncolus lauri, Gyll. in Schönh. Gen. Curc. iv. p. 1076¹.

Hab. MEXICO¹.

Found in seeds of "*Laurus*"*. The type of this insect cannot now be found in the Stockholm Museum. It is a small narrow form, and probably not a true *Rhyncolus*. Gyllenhal compares *R. lauri* with his *R. oryzae*, an introduced insect found in grains of rice at Stockholm, and equally unknown to me.

MACRANCYLOIDES, gen. nov.

Rostrum very short and stout, about as long as broad, parallel-sided, unimpressed and almost continuous with the vertex above, the scrobes extending backward to the anterior limit of the eyes and then abruptly running downward; eyes very large, depressed, placed low down at the sides of the head and almost hidden from above; antennæ with a closely articulated 7-jointed funiculus and a small ovate club; prothorax cylindrical, truncate at the base and apex, unimpressed; scutellum minute, transverse; elytra very long and cylindrical, of the same width as the base of the prothorax, conjointly rounded and not explanate at the apex; anterior coxæ narrowly separated; metasternum nearly as long as ventral segments 1 and 2 united; tarsi slender, the third joint sub-bilobed, the claws free; body very elongate, flattened-cylindrical.

Type, *M. perlongus*.

The type of this genus is a very elongate, cylindrical insect resembling *Macrancylus*, from which it differs in having the rostrum parallel-sided (*i. e.* not widened basally), the eyes larger and placed lower down at the sides of the head, and the anterior coxæ narrowly separated. *Macrancylus* and *Stenancylus* would be almost as well placed amongst the "Rhyncolini."

1. *Macrancylodes perlongus*, sp. n. (Tab. III. figg. 31, 31 a, b.)

Black, the antennæ and tarsi piceous, shining, finely alutaceous, subglabrous. Head and rostrum finely, closely punctate, the head transversely strigose beneath. Prothorax as long as broad, very gradually narrowing from the base, the sides straight, the subapical constriction faintly indicated; closely punctate, except along the narrow median line, longitudinally strigose at the sides (fig. 31 b). Elytra more than twice the length of the prothorax, parallel-sided; punctate-striate, the interstices feebly convex, finely uniseriate-punctate. Beneath closely punctate, the first ventral segment unimpressed.

Length 4½, breadth 1 millim. (♀?)

Hab. GUATEMALA, Cacao near Trece Aguas, Alta Vera Paz (*Schwarz and Barber, in U.S. Nat. Mus.*).

* ? *Persea* sp.

One example. Larger and a little less convex than *Macrancylus linearis*, the body black, the prothorax longitudinally strigose at the sides. The raised transverse lines on the gula and under surface of the head look as if they could be used for stridulating purposes.

DENDROCTONOMORPHUS.

Dendroctonomorphus, Wollaston, Trans. Ent. Soc. Lond. 1873, pp. 440, 502, 591, 649.

Wollaston referred two species to this genus—one from Ceylon (the type), the other from Mexico; and the N.-American *Rhyncolus brevis*, Boh., placed somewhat doubtfully in *Stenoscelis* by Horn, would probably be best included here. The 7-jointed funiculus distinguishes *Dendroctonomorphus* from *Hexarthrum*. The antennal club is rounded and abrupt and the scutellum minute.

1. *Dendroctonomorphus parallelus*. (Tab. III. figg. 32, 32 a.)

Dendroctonomorphus parallelus, Woll. Trans. Ent. Soc. Lond. 1873, p. 649¹.

Hab. MEXICO (*Truqui, in coll. Fry*¹).

No definite locality is known for this insect. There are two specimens of it in the Fry collection at the British Museum. *D. parallelus* is narrower than *D. brevis* (Boh.), and has a longer and more coarsely punctured prothorax, and more distinctly asperate elytra.

OOCORYNUS, gen. nov.

Rostrum very short, broad, subtriangular, almost continuous with the vertex above, sulcate at the base, the scrobes obliquely and rapidly descending to the lower limit of the eyes, the latter finely faceted, large, strongly transverse, depressed, and placed low down at the sides of the large, globose head; antennæ with a closely-articulated, 7-jointed funiculus, and an abrupt, short-ovate, pubescent club, the basal joint of which forms about half of the entire mass; prothorax subcylindrical, truncate at the base and apex; scutellum very small, transverse, depressed; elytra long, cylindrical; anterior coxæ narrowly separated; metasternum considerably longer than the first ventral segment; legs rather slender, short, the tarsi narrow and with the third joint simple, the claws free; body narrow, elongate, flattened-cylindrical, coarsely sculptured above.

Type, *O. corrosus*.

This genus must be placed near *Dendroctonomorphus*, *Brachytemnus*, and *Calyciforus* (Wollaston's group V. pp. q.), from all of which it differs in the position of the eyes, these being placed so low down that they are almost entirely hidden from above. The elytral sculpture, too, is peculiar, the rostrum is sulcate down the basal half, and the body is flattened.

1. *Oocorynus corrosus*, sp. n. (Tab. III. figg. 33, 33 a.)

Subopaque above, alutaceous beneath, black, the tarsi and antennæ fusco-ferruginous, clothed with a few, very minute, hair-like scales. Head and rostrum densely punctate, the basal half of the latter somewhat convex and sharply sulcate down the middle. Prothorax as long as broad, very little narrowed in front,

and without definite subapical constriction; coarsely, densely punctate. Elytra at the base slightly wider than the prothorax, conjointly rounded and narrowly explanate at the apex, the humeri subangular in front; with rows of coarse, subquadrate, closely-placed punctures, separated by very narrow, raised, uniseriate-punctate, subasperate interstices. Beneath closely, moderately coarsely punctate; first ventral segment depressed down the middle in the ♂.

Length (includ. rostr.) $3\frac{1}{3}$ – $3\frac{1}{2}$, breadth 1 millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

Six specimens. Compared with *Calyciforus inæqualis*, this is a longer and less convex insect.

CALYCIFORUS.

Calyciforus, Wollaston, Trans. Ent. Soc. Lond. 1873, pp. 440, 503, 592, 650.

Wollaston referred two species to *Calyciforus*, both from Brazil, one of which enters within our limits. He was in some doubt as to whether his *C. erosus* was not the female of *C. excavatus*, but this is not likely to be the case. The Mexican and Guatemalan form now added approaches *C. erosus*, but it has the elytral sulci differently sculptured. The antennæ in this genus have a closely articulated, 7-jointed funiculus, and a broad, strongly transverse, truncated club.

1. *Calyciforus excavatus*. (Tab. III. figg. 34, 34 a, b.)

Calyciforus excavatus, Woll. Trans. Ent. Soc. Lond. 1873, p. 650¹.

Hab. PANAMA, Chiriqui (*Ribbe*).—TRINIDAD (*Mus. Brit.*); BRAZIL, Santa Catharina and Bahia¹.

One specimen, agreeing with the numerous others from Brazil in the Fry collection.

2. *Calyciforus inæqualis*, sp. n. (Tab. III. fig. 35.)

Elongate, cylindrical, convex, moderately shining, black, the antennæ, tibial claws, and tarsi testaceous, clothed with a few minute, scattered hairs. Head and rostrum closely, finely punctate, the head shallowly foveate between the eyes. Prothorax very coarsely, closely punctate, sometimes with a smooth abbreviated median line, the base with or without a shallow depression in the middle. Elytra deeply sulcate, the sulci more or less distinctly crenate-punctate, the interstices raised, convex, each with a row of asperate punctures, the humeri in some specimens (♂?) angulate in front.

Length (includ. rostr.) $3\frac{1}{3}$ – $3\frac{7}{8}$, breadth $1\frac{1}{10}$ – $1\frac{1}{8}$ millim.

Hab. MEXICO (*Mus. Brit.*), Jalapa (*Höge*); GUATEMALA (*Sallé*), San Joaquin in Alta Vera Paz (*Champion*).

Four specimens, varying considerably in the sculpture of the elytra, those with angular humeri assumed (as in the genus *Tomolips*) to be males. Wollaston describes the elytral sulci as transversely strigose in the two species named by him, whereas in the present insect the sulci are distinctly crenate-punctate.

TOMOLIPS.

Wollastonia, Horn, Proc. Am. Phil. Soc. xiii. p. 433 (Sept. 19th, 1873) ; Leconte, Proc. Am. Phil. Soc. xv. p. 341 (1876) (nec Heer, 1852).

Tomolips, Wollaston, Trans. Ent. Soc. Lond. 1873, pp. 439, 501, 590, 648 ; Champion, Ent. Monthly Mag. xlv. p. 104 (1909).

A remarkable genus, the species of which superficially resemble *Hylastes* and other genera of Scolytidæ. The 5-jointed funiculus distinguishes it at once from *Calyciforus*. The two forms here recognized may be separated thus:—

Anterior tibiæ with a compressed bifid tooth at the inner apical angle in ♂ ;

seriate punctures on elytra closely placed *bicalcaratus*, Woll.

Anterior tibiæ simply mucronate at the inner apical angle in both sexes ;

seriate punctures on elytra somewhat scattered *quercicola*, Boh.

1. ***Tomolips bicalcaratus*.** (Tab. III. figg. 36, 36 a, ♂ ; 37, ♀.)

♂. *Tomolips bicalcaratus*, Woll. Trans. Ent. Soc. Lond. 1873, p. 648¹.

♀. *Tomolips asperatus*, Woll. loc. cit. p. 649².

Hab. MEXICO (*Truqui*^{1 2}: ♂ ♀), Sacramonte near Amecameca in Morelos (*Herrera*, in *U.S. Nat. Mus.*: ♀).

I have seen two specimens of *T. bicalcaratus* and three of *T. asperatus*, the latter having the prothorax relatively shorter, the elytral humeri subquadrate in front, and the sculpture of the entire upper surface less coarsely punctate than in *T. bicalcaratus*, differences no doubt sexual, like that observable in the armature of the anterior tibiæ. The elytral interstices are conspicuously uniseriate-punctate, and towards the sides and apex are set with minute raised points.

2. ***Tomolips quercicola*.**

Rhyncolus quercicolus, Boh. in Schönh. Gen. Curc. viii. 2, p. 281¹.

Wollastonia quercicola, Horn, Proc. Am. Phil. Soc. xv. p. 434².

Tomolips quercicola, Champ. Ent. Monthly Mag. xlv. p. 104³.

Hab. NORTH AMERICA, North¹ and South Carolina², Louisiana², and Georgia², Columbus in Texas.—GUATEMALA, Volcan de Fuego (*Salvin*), Santa Cruz near San Gerónimo, Capetillo (*Champion*).

Extremely like *T. bicalcaratus*, but separable from it by the simple mucronate anterior tibiæ in the male. The sculpture is somewhat variable in both species. The five specimens obtained in Guatemala agree very nearly with two others before me from Texas.

Subfam. *CALANDRINÆ*.

Since the issue of the seventh volume of Lacordaire's 'Genera des Coléoptères' (1866) but little work has been done at exotic Calandrids beyond Chevrolat's attempted revision of them, published in part in 1882, and completed, posthumously, by Jekel and Sallé, in 1885. Horn and Leconte, however, in 1873-76, eliminated from the old genus *Sphenophorus* a few forms from the Southern United States (one certainly introduced from warmer climes), under the names *Cactophagus*, *Metamasius*, and *Rhodobænus*; and though these authors placed only one or two species in each of the above-mentioned genera, the latter are now known to include most of the spotted or maculate Tropical American Sphenophorina, *Sphenophorus*, sensu stricto, becoming less numerous southward. The species in many cases, owing to their greasy nature and their extremely variable colour, are often very difficult to determine till they are thoroughly cleaned and the sexual characters studied. The males in certain members of the genera *Cactophagus* and *Metamasius* have either the rostrum sulcate and crenate beneath, or the anterior or posterior tibiæ strongly ciliate, or the posterior tibiæ penicillate, &c.; and the females (especially in *Rhodobænus*) often have a dentiform prominence on the peduncle of the submentum in front. In *Homalostylus* the antennal scape is broad and flattened in one or both sexes.

The subfamily Calandrinæ is very largely represented in the tropics of both the Old and the New World.

Group *RYNCHOPHORINA*.

Rhynchophorides, Lacordaire.

DYNAMIS.

Dynamis, Chevrolat, Ann. Soc. Ent. Fr. 1882, p. 563.

Chevrolat includes four Tropical American species under this genus, the type of which will be *Calandra borassi*, F.*. These insects have the median lobe of the prothorax more produced than in *Rhynchophorus*, thus shortening the scutellum, which is also much less extended behind and comparatively small and narrow; the rostrum thick and compressed to the tip, which is dilated, and the crest of erect hairs is wanting in the male.

* *D. (Rhynchophorus) politus*, Gyll., described from the female sex only, may prove to be wrongly placed in *Dynamis*. Amongst a series of twenty *Rhynchophori* before me from St. Vincent, W.I., two are *R. palmarum* (♀), and the rest (♂ ♀) are extremely like that species, except that they have the upper surface shining (instead of velvety and opaque); these latter may belong to Gyllenhal's species, which is described as having the rostrum attenuate and not reflexed at the apex, and the surface shining. There are similar specimens from Trinidad and Cayenne mixed with the series of *R. palmarum* in the British Museum.

1. *Dynamis germari*.

Calandra germari, Perty, Del. Anim. art. Bras. p. 82, t. 16. fig. 12¹.

Dynamis germari, Chevr. Ann. Soc. Ent. Fr. 1882, p. 563².

Rhynchophorus noxius, Gyll. in Schönh. Gen. Curc. iv. p. 821³; viii. 2, p. 216⁴.

Black, subopaque or feebly shining, alutaceous. Rostrum a little shorter than the prothorax, feebly curved, strongly compressed and of almost equal thickness (as seen in profile) to the tip, in both sexes dilated at the apex (as seen from above) and very finely punctate. Prothorax gradually narrowing from the base, the median lobe strongly, arcuately produced; the surface impressed with scattered very minute punctures, the interspaces excessively minutely punctate, the disc with indications of a smoother median line. Scutellum small, the long apical portion very narrow and lanciform. Elytra each with five deep sulci, the fourth and fifth confluent at the apex, the outer striae almost obsolete and represented by four sinuous lines of fine punctures, which are scarcely coarser than those scattered along the interstices, the dorsal interstices convex, the others flat. Ventral depression of the ♂ very shallow. Femora and tibiae densely fringed with long matted blackish-brown hairs in the ♂, in the ♀ with shorter and fewer hairs. Length 29–32, breadth 11½–12½ millim. (♂ ♀.)

Hab. PANAMA, Bugaba (*Champion*).—SOUTH AMERICA, Cayenne², Brazil^{2 3 4}.

A single female specimen from Bugaba is referred to this species, originally described from an introduced example of the same sex found at Boston¹. There is a short series of the same species, including both sexes, from Brazil, in the Fry collection at the British Museum, and the above description is supplemented from these insects.

2. *Dynamis peropacus*, sp. n. (Tab. IV. figg. 1, ♂; 2, ♀.)

Black, opaque and strongly pruinose above, shining beneath. Rostrum a little shorter than the prothorax, feebly curved, strongly compressed and of almost equal thickness (as seen in profile) to the tip, in both sexes dilated at the apex (as seen from above), and very finely, sparsely punctate. Prothorax gradually narrowing from the base, the median lobe broadly, arcuately produced, the surface with minute scattered punctures. Scutellum small, oblong-triangular, and with a smooth lanciform median ridge. Elytra each with five narrow, moderately deep sulci, the fourth and fifth not confluent at the apex, the outer striae almost obsolete and represented by four sinuous lines of very fine punctures, the dorsal interstices flat at the base and becoming feebly convex towards the apex. First ventral segment hollowed down the middle anteriorly in both sexes. Femora and tibiae densely fringed with long matted blackish-brown hairs in the ♂, the hairs shorter in the ♀.

Length 32–36, breadth 13½–15 millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Richardson*).

Two males and one female. Extremely like *Rhynchophorus palmarum*, but with a very much stouter, compressed, apically dilated rostrum, which is not cristate in the male, a longer median lobe to the prothorax, and a much smaller scutellum. The velvety-black opaque upper surface, the broader scutellum, and the narrower elytral sulci (the fourth and fifth of which are not coalescent at the apex) separated by flatter interstices, sufficiently distinguish *D. peropacus* from *D. germari*. It seems curious that this species was not obtained by either Belt or Janson at Chontales.

RHYNCHOPHORUS.

Rhynchophorus, Herbst, Käfer, vi. p. 3 (1795); Schönherr, Gen. Curc. iv. p. 816; Lacordaire, Gen. Col. vii. p. 275; Horn, Proc. Am. Phil. Soc. xiii. p. 408; Chevrolat, Ann. Soc. Ent. Fr. 1882, p. 560.

Chevrolat excluded from this genus the Tropical American forms allied to *R. borassi*, F., all of which have the rostrum very stout, more or less dilated at the tip, and non-cristate in the male, and the scutellum small. *R. palmarum*, therefore, is the only true *Rhynchophorus* at present known from within our limits, though it is possible that *R. cruentatus*, F. (= *zimmermanni*, Fähr.)*, of the Southern and Gulf States, may be found to extend southward into Mexico and Guatemala. All the species attack palms: the North-American insect (according to S. V. Summers†) bores into the roots and stocks of the "palmetto," and *R. palmarum* lives upon "Cocos," &c.

1. ***Rhynchophorus palmarum*.** (Tab. IV. figg. 3, ♂; 4, ♀.)

Curculio palmarum, Linn. Mus. Lud. Ulr. p. 42 (1772)¹; Oliv. Ent. v. no. 83, p. 77, t. 2. figg. 16 a (♂), b (♀)².

Rhynchophorus palmarum, Gyll. in Schönh. Gen. Curc. iv. p. 820³; Lec. Proc. Am. Phil. Soc. xv. p. 424 (1876)⁴; Chevr. Ann. Soc. Ent. Fr. 1882, p. 561⁵; Lec. & Horn, Class. Col. N. Am., 2nd edit. p. 506 (1883)⁶; Blandf. Kew Bulletin, 1893, pp. 27-60, t. 1 (larva, &c.)⁷.

Rhynchophorus lanuginosus, Chevr. Le Nat. ii. no. 39, p. 315 (Nov. 1880) (♂)⁸.

Rhynchophorus depressus, Chevr. loc. cit. (♀)⁹.

Hab. NORTH AMERICA, Southern California⁶ west of San Diego⁴.—MEXICO; BRITISH HONDURAS; GUATEMALA; HONDURAS, Ruatan I.; NICARAGUA; COSTA RICA; PANAMA.—SOUTH AMERICA^{1 6} to Brazil³; ANTILLES⁴, Guadeloupe^{8 9}, St. Vincent.

An abundant insect throughout the warmer parts of America. Amongst the various allied forms, the present species may be known by its opaque, velvety-black upper surface, and the somewhat tapering rostrum, which in the male is mesially depressed and furnished with a dense brush of blackish or fulvous erect hairs.

R. lanuginosus, Chevr., is no doubt based upon a large male, and *R. depressus*, Chevr., upon a small female, of *R. palmarum*, greasy specimens of which have a very different appearance from those in clean condition.

The length varies from 23-38 mm.

* There is a specimen of this species, which varies greatly in colour, in the Sharp collection, labelled "Guatemala, Mus. Turner," but the locality requires confirmation.

† Canad. Ent. v. pp. 123, 124 (1873).

Group SPHENOPHORINA.

CACTOPHAGUS.

Cactophagus, Leconte, Proc. Am. Phil. Soc. xv. p. 331 (1876); Chevrolat, Ann. Soc. Ent. Fr. 1882, p. 579 (part.); Casey, Ann. N. York Acad. Sci. vi. p. 684 (1892).

The type of this genus is *Sphenophorus validus*, Lec. (= *spinolæ*, Gyll., var.), and it will also include numerous Tropical American forms, such as *S. sierrakowskyi*, Gyll., *S. tibialis*, Waterh., *S. pulcherrimus*, Chevr., &c. Its principal characters are the stout cylindrical rostrum; the deeply channelled peduncle of the submentum* (the sides being thus raised anteriorly into two vertical lamellæ which are rounded at the ends); the narrowly separated anterior, and widely separated intermediate, coxæ; the broad, flattened, antero-intercoxal process of the metasternum, which is bisinuate in front; the unarmed femora; the rounded, unarmed, outer apical angle of the tibiæ; and the very large third tarsal joint, which is spongy-pubescent beneath. Amongst the fourteen species referred to *Cactophagus* by Chevrolat, eight only belong to it as here understood. Most of them have the prothorax or elytra spotted or banded with red, and the anterior or posterior tibiæ are often strongly ciliate or penicillate within, and the fifth ventral segment furnished with a cluster of long erect hairs in the males. The colour is variable in some cases, as in *Rhynchophorus*, *Metamasius*, *Phyllerythrurus*, and a few other genera of the group Sphenophorina. Some of the species of the present genus are recorded as attacking *Cereus* or *Opuntia*.

The Central-American species may be separated thus:—

- a. Anterior tibiæ densely fringed with long or moderately long hairs in ♂, the fifth ventral segment without cluster of erect hairs in this sex.
 - a¹. Seriate punctures on the elytra coarse and foveiform.
 - a². Elytra with two red fasciæ. *fahraei*, Gyll.
 - b². Elytra immaculate *striatoforatus*, Gyll.
 - b¹. Seriate punctures on the elytra finer.
 - c². Prothorax almost smooth.
 - a³. Elytra with two red fasciæ *spinolæ*, Gyll.
 - b³. Elytra immaculate *spinolæ*, Gyll., v. *validus*, Lec.
 - d². Prothorax closely punctured; elytra with two transverse curved lines of small scattered red spots on the disc, often obsolete . . *validirostris*, Gyll.
- b. Posterior tibiæ densely fringed with long, and the other tibiæ with shorter, hairs in ♂, the fifth ventral segment without cluster of long hairs in this sex; prothorax with a broad stripe on each side, and the elytra with two interrupted fasciæ, red, these markings sometimes obsolete *ciliatus*, sp. n.

* The gular peduncle of Leconte is termed the peduncle of the submentum by Lacordaire.

- c. Posterior tibiæ penicillate and the other tibiæ sinuate and ciliate in ♂, the fifth ventral segment with a cluster of long erect hairs in this sex.
- c¹. Prothorax and elytra each with an interrupted red fascia, the prothorax with a deep coarsely punctured depression *rufocinctus*, sp. n.
- d¹. Prothorax with an oblique stripe on each side, and the elytra with an oblique median fascia, red, the prothorax with a shallow depression at the base *rufomaculatus*, sp. n.
- e¹. Prothorax and elytra variegated with red, the prothorax parallel-sided at the base and with a shallow basal depression *cirratus*, sp. n.
- d. All the tibiæ fringed with short hairs within in both sexes.
- f¹. Fifth ventral segment with a dense cluster of erect hairs in ♂; prothorax and elytra red, spotted or variegated with black: size large . . . *sierrakowskyi*, Gyll.
- g¹. Fifth ventral segment without cluster of hairs in ♂; prothorax and elytra each with a rufous or orange fascia; rostrum comparatively short: size smaller, body less elongate *pulcherrimus*, Chevr.

1. *Cactophagus fahræi*. (Tab. IV. figg. 5, 5a, ♂.)

Sphenophorus fahræi, Gyll. in Schönh. Gen. Curc. iv. p. 884¹.

Cactophagus fahræi, Chevr. Ann. Soc. Ent. Fr. 1882, p. 579².

♂. Anterior tibiæ densely fringed with rather long hairs; ventral excavation shallow.

Hab. MEXICO, between Oaxaca and Acapulco¹ (*Mus. Holm.*), Acapulco, Oaxaca (*Höge*), Capulalpam (*Sallé*), Mochitlan in Guerrero (*Baron*).

Sent us in profusion from Oaxaca by the late F. Höge, the specimens showing no sign of variation in the colour of the elytra. The two red fasciæ are each formed by a transverse series of somewhat tumid, shining, oblong, coalescent spots, these being much more prominent than in *C. spinolæ*. The striæ are impressed with scattered oblong deep foveæ, except in the space occupied by the tumid red spots, where the impressions are smaller. The prothorax is usually of a dark rufo-piceous tint. The length varies from 16–25 mm.

The following is probably nothing more than an immaculate form of the same species.

2. *Cactophagus striatoforatus*.

Sphenophorus striatoforatus, Gyll. in Schönh. Gen. Curc. iv. p. 878¹.

Cactophagus striatoforatus, Chevr. Ann. Soc. Ent. Fr. 1882, p. 580².

Sphenophorus perforatus, Fähr. in Schönh. Gen. Curc. viii. 2, p. 236³.

♂. Anterior tibiæ densely fringed with moderately long hairs; ventral excavation rather deep.

Hab. MEXICO, Orizaba (*Sallé*), Jalapa, Mexico city (*Höge*); GUATEMALA, El Rancho (*Deam*, in *U.S. Nat. Mus.*); SALVADOR, Izalco (*Knab*, in *U.S. Nat. Mus.*); COSTA RICA (*Pittier*, *Van Patten*, *Sallé*), Azahar de Cartago (*Underwood*), San José (*Biolley*), Piedras Negras (*U.S. Nat. Mus.*).—COLOMBIA¹⁻³; TRINIDAD (*coll. Fry*).

Sent in numbers from Costa Rica. It lives in a species of *Cereus*, according to Biolley, and there is an example from Colombia in the Fry collection labelled as having been found on the same genus of Cactaceæ. This insect is extremely like the immaculate form of *C. spinolæ*, but may be easily distinguished therefrom by the deep, oblong, foveiform impressions of the elytral striæ. It bears much the same relation to the Mexican *C. fahræi* as the northern *C. validus* does to *C. spinolæ*, and replaces the former as we go southward.

3. *Cactophagus spinolæ*. (Tab. IV. figg. 6, 6 a, ♀; 7, 7 a, ♂, var.).

Sphenophorus spinolæ, Gyll. in Schönh. Gen. Curc. iv. p. 883¹; Dugès, La Naturelleza, v. p. 121, t. 3. figg. 5, 5 a-m (1881)²; Ann. Soc. Ent. Belg. xxx. pp. 31-33, 44, t. 2. figg. 1-10 (1886)³.

Cactophagus spinolæ, Chevr. Ann. Soc. Ent. Fr. 1882, p. 579⁴.

Calandra bifasciata, Sturm, Cat. p. 227 (1843)⁵ (nec Gyll.).

α. Prothorax with an oblique patch on each side near the apex (in one example from Ventanas extending downwards to the hind angles and in one from Mexico city wanting), the elytra with two narrow transverse fasciæ (the anterior one somewhat curved or oblique, and neither reaching the suture), and the metasternum usually with a patch on each side, sanguineous or ferruginous [*spinolæ*, Gyll.].

♂. Anterior tibiæ densely fringed with rather long hairs; ventral depression shallow.

Hab. MEXICO¹⁻⁵ (*Truqui*; *Mus. Brit.*), Hacienda de Bleados in San Luis Potosi (*Dr. Palmer*), Durango (*Wickham*), Ventanas, Durango city, Atlixco, Zapotlan, Morelia, Mexico city, Chilpancingo, Jalapa (*Höge*), Mochitlan (*Baron*), Amula, Puente de Ixtla, Cuernavaca (*H. H. Smith*), Guanajuato, Puebla (*Dugès*, *Sallé*), Sierra de Ajusco, Tlalnepantla (*Hay*, in *U.S. Nat. Mus.*), Uruapan (*Deam*, in *U.S. Nat. Mus.*).

β. The elytral fasciæ broader, in one specimen (fig. 7) showing a tendency to coalesce along the second and fourth interstices, the scutellum and pectus also sometimes red.

Cactophagus obliquefasciatus, Chevr. loc. cit. p. 580⁶.

Hab. MEXICO, Puebla⁶ (*Sallé*).

γ. Above and beneath black or pitchy-black.

Sphenophorus validus, Lec. Proc. Acad. Phil. 1858, p. 80⁷; Horn, Proc. Am. Phil. Soc. xiii. p. 415⁸.

Cactophagus validus, Lec. Proc. Am. Phil. Soc. xv. p. 322⁹; Chevr. Ann. Soc. Ent. Fr. 1882, p. 579¹⁰; Casey, Ann. N. York Acad. Sci. vi. p. 685¹¹.

Sphenophorus procerus, Lec. Proc. Acad. Phil. 1858, p. 80¹².

Sphenophorus fuliginosus, Chevr. in litt.¹³.

Cactophagus subnitens, Casey, loc. cit.¹⁴.

Hab. NORTH AMERICA, San Diego, California^{8-10 12}, Arizona¹⁴.—MEXICO⁸⁻¹⁰ (*Sallé*, *Mus. Brit.*), Sonora^{7 8} (*Morrison*), Tehuacan in Puebla, Mexico city, Oaxaca (*Höge*).

An abundant insect in *Opuntia*'s in Mexico, where the fasciate form is much commoner than *C. validus*. The var. *obliquefasciatus* (the type of which I have seen) occurs with typical *C. spinolæ* at Puebla, these two forms being shown on our Plate. *C. subnitens* is based upon smoother and more shining individuals, with the elytral

striæ rather coarsely punctate towards the base. Similar specimens are also to be found amongst a series of the typical *C. spinolæ* from almost any of the localities quoted *. The rufous markings vary in development and are often altogether wanting. The length varies from 14–25 mm. The larva and pupa are figured by Dugès^{2 3}.

4. *Cactophagus validirostris*. (Tab. IV. figg. 8, 8 a, ♂.)

Sphenophorus validirostris, Gyll. in Schönh. Gen. Curc. iv. p. 886¹.

Cactophagus validirostris, Chev. Ann. Soc. Ent. Fr. 1882, p. 579².

Sphenophorus bifasciatus, Gyll. loc. cit. p. 885³ (nec Sturm).

♂. Rostrum strongly bowed towards the apex, the apical portion somewhat compressed, moderately stout, becoming almost smooth towards the tip; ventral excavation long and broad; anterior coxæ often with a small tubercle on their inner face; femora and tibiæ finely ciliate, the anterior tibiæ with longer hairs.

♀. Rostrum regularly arcuate, the apical portion more slender, subcylindrical, and much smoother; femora almost bare, the tibiæ with a dense line of very short hairs.

Hab. MEXICO^{1 2 3} (*Mus. Brit.*; *Flohr*), Misantla, Jalapa (*Höge*), Cordova (*Knab*, in *U.S. Nat. Mus.*), Tepansacoalco in Oaxaca (*Sallé*); GUATEMALA, Cerro Zunil, Pantaleon, Purula (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

The thirty specimens of this species before me vary greatly in size, in the length of the rostrum, the development of the prothorax (it being strongly rounded at the sides in some examples, and the depression on the disc is sometimes long and deep, and sometimes shallow), and the number of spots on the elytra, these being occasionally obsolete. The spots, when present, are arranged in two curved, interrupted, transverse fasciæ, which become coalescent laterally and divergent towards the suture. The prothorax is somewhat closely punctate, and there is also a row of fine punctures down each elytral interstice, as well as a series of coarser impressions along the striæ, all being filled with a brownish or cinereous incrustation. *C. validirostris* was founded upon a large example with a deeply excavate prothorax, *C. bifasciatus* upon a small specimen with a flatter prothorax. The length varies from 10½–17, and the breadth from 4–6⅞ mm.

5. *Cactophagus ciliatus*, sp. n. (Tab. IV. figg. 9, 9 a, ♂.)

Elongate-oval, robust, opaque above; black, the prothorax with a very broad, anteriorly-widened stripe on each side extending from the subapical groove to near the base, and the elytra with a broad transverse fascia below the base and a large transverse patch on the disc just beyond the middle (neither reaching the suture), rufous. Rostrum curved, very stout, much shorter than the prothorax, obsoletely canaliculate beneath, very sparsely finely punctate, the widened basal portion with an impressed line, that of the ♀ slightly longer and smoother, the frontal fovea small. Prothorax about as long as broad, depressed and sparsely punctate down the middle posteriorly, feebly bisinuate at the base. Scutellum elongate-triangular, flattened, slightly hollowed in front. Elytra much wider than the prothorax, oblong-subcordate, punctate-striate, the punctures conspicuous and somewhat widely separated, the striæ fine, the interstices feebly convex. Pygidium very coarsely punctured. Beneath sparsely, moderately coarsely punctate. Anterior and intermediate coxæ with a small cluster of hairs. Femora and tibiæ closely ciliate in both sexes.

* A similar variation has been noticed by Blaisdell in certain species of the Tenebrionid genus *Eleodes* (cf. Ent. News, 1910, p. 64).

Var. Entirely black (♂ ♀).

♂. Ventral excavation long, broad, and shallow, the fifth segment bare and unimpressed at the tip; the tibiae fringed with longer hair than in the ♀, that on the posterior pair very long and dense; last dorsal segment (that covered by the pygidium) also densely fulvo-pilose along the apical margin.

Length 17-23, breadth 7-9 millim. (♂ ♀.)

Hab. MEXICO (*Sallé, Flöhr*: ♂ ♀), Mexico city (*Höge*: ♂), Temax in N. Yucatan (*Gaumer*: ♂ ♀).

Three specimens of the red-banded form and four entirely black, these latter from Yucatan. The posterior tibiae in this insect are very strongly ciliate in the male.

6. *Cactophagus rufocinctus*, sp. n. (Tab. IV. figg. 10, 10 a, ♂.)

♂. Elongate-oval, rather convex, opaque above; black, the prothorax with a broad, oblique, undulate fascia on each side at about the middle (the two fasciae almost meeting on the disc and extending down the flanks), and the elytra with a narrower oblique median fascia extending inwards to the suture, rufous. Rostrum very stout, curved, a little shorter than the prothorax, sparsely, finely punctate, smooth at the tip, sulcate beneath, the widened basal portion also sharply sulcate above, the groove extending upwards to the deep, oblong, frontal fovea. Prothorax about as long as broad, rounded at the sides, rapidly narrowing from the middle to the short, tubulate, punctured anterior portion, the disc strongly depressed and very coarsely punctate in the centre posteriorly. Scutellum large, broad, triangular, smooth, almost flat. Elytra wider than the prothorax, rapidly narrowing from the rounded humeri, transversely depressed at the base; rather coarsely and deeply punctate-striate, the interstices feebly convex and almost smooth. Pygidium coarsely punctate, convex, sparsely pilose at the tip. Beneath sparsely, finely punctate, the ventral depression long and broad, the fifth segment with a large rounded space at the apex set with long erect fulvous hairs, which show a tendency to form three small scattered tufts on each side. Femora and tibiae ciliate, the tibiae sinuate within, the posterior pair with a curved, matted tuft of longer and coarser hairs at about the middle.

Length $11\frac{3}{4}$, breadth $6\frac{1}{10}$ millim.

Hab. COSTA RICA, Carrillo (*Schaus, in U.S. Nat. Mus.*).

One example. This is a form of the Colombian *C. tibialis* (Waterh.), from which it differs in the less sinuate tibiae of the male and in the general system of coloration. The prothorax has a very coarsely punctate, deep basal depression.

7. *Cactophagus rufomaculatus*, sp. n. (Tab. IV. figg. 11, 11 a, ♂.)

♂. Elongate-oval, broad, rather convex, opaque above, somewhat shining and greyish-pruinose beneath; black, the prothorax with an oblique stripe on each side, and the elytra with an oblong spot on the shoulders beneath and an oblique median fascia (nearly reaching the suture), rufous. Rostrum very stout, curved, about three-fourths the length of the prothorax, sparsely, minutely punctate, smooth at the tip, sulcate beneath, the basal portion also narrowly, interruptedly sulcate above. Prothorax slightly broader than long, the sides rounded anteriorly and parallel at the base, the basal depression shallow and with a few scattered punctures. Scutellum broad, subtriangular, flattened. Elytra oblong-cordate, deeply and rather coarsely punctate-striate, the interstices feebly convex. Pygidium sparsely punctate, somewhat fimbriate along the apical margin. Beneath sparsely punctate, the ventral excavation long and deep, the fifth segment with a large space at the apex set with erect fulvous hairs. Femora and tibiae ciliate, the tibiae sinuate within, the posterior pair with a small tuft of longer hairs at about the middle.

Length 19, breadth $7\frac{1}{2}$ millim.

Hab. PANAMA, Chiriqui (*Trötsch*).

One male. Very near *C. cirratus* and *C. rufocinctus*, but with a smaller tuft of hairs on the hind tibiæ (σ), the prothorax parallel-sided at the base and with a shallow, sparsely punctured basal depression, the rufous markings differently shaped.

8. *Cactophagus cirratus*, sp. n. (Tab. IV. figg. 12, 12 a, σ .)

σ . Elongate-oval, broad, rather convex, opaque above, somewhat shining and pruinose beneath; black, the prothorax in great part (the two large, coalescent spots at the base, the lanciform median spot, and the short tubulate anterior lobe, black), and the elytra with the base very narrowly and an outwardly-dilated submedian fascia (these markings connected along the outer margin), rufous. Rostrum very stout, curved, about two-thirds the length of the prothorax, with a few minute scattered punctures, smooth at the tip, sulcate beneath, the basal portion also sharply sulcate above to the deep oblong frontal fovea. Prothorax a little broader than long, rounded at the sides, gradually narrowed to the coarsely-punctured tubulate anterior portion, bisinuate at the base, the disc excavate and coarsely punctate in the middle posteriorly and also with a few scattered punctures along the centre. Scutellum elongate-triangular, somewhat concave. Elytra wider than the prothorax, oblong-cordate; deeply striate, the striæ with rather fine scattered punctures, the interstices smooth and convex. Pygidium slightly flattened, sparsely punctate and fulvo-pilose, the hairs tending to form a median crest and a fringe along the apical margin. Beneath closely punctate, the broad ventral excavation included, the fifth segment with a large space at the apex set with long erect fulvous hairs. Femora and tibiæ ciliate, the tibiæ sinuate within, the posterior pair with an oblique matted tuft of much longer and coarser hairs at the middle.

Length $21\frac{1}{2}$, breadth $8\frac{1}{2}$ millim.

Hab. NICARAGUA, Chontales (*Janson*).

One specimen. Larger and broader than *C. rufocinctus*, the basal depression of the prothorax shallower and less coarsely punctate, the striæ more finely punctate, the markings of the upper surface differently shaped. The male-characters are similar. The ventral depression is closely punctate, as in one of the five examples here referred to *C. sierrakowskyi*.

9. *Cactophagus sierrakowskyi*. (Tab. IV. figg. 13, 13 a, 14, σ , 15, φ , vars.)

Sphenophorus sierrakowskyi, Gyll. in Schönh. Gen. Curc. iv. p. 887¹.

Cactophagus sierrakowskyi, Chevr. Ann. Soc. Ent. Fr. 1882, p. 580².

σ . Ventral excavation broad and shallow; fifth segment with a large rounded space thickly clothed with long, coarse, erect, fulvous hairs; pygidium fulvo-pilose and suberistate at the tip; femora strongly ciliate towards the base beneath; tibiæ sinuate and set with short, curled, fulvous hairs along their inner edge.

φ . Rostrum a little more slender; ventral excavation shallower; fifth segment with two small tufts of fulvous hair at the apex; anterior and intermediate femora with a small tuft of long fulvous hairs at the base, similar to that on the coxæ.

Hab. COSTA RICA, Guapiles 850 feet (*Schaus*, in *U.S. Nat. Mus.*: σ), Miravalles (*Underwood*: φ); PANAMA, Chiriqui (*Trötsch and coll. Fry*: σ). — COLOMBIA, Antioquia¹ [σ].

The six specimens before me (including the type) vary greatly in size and colour, but they seem to belong to one variable species, which is separable at once from

C. tibialis (Waterh.) and its allies by the absence of the pencil of hairs at the middle of the hind tibiæ in the male. The punctuation of the median portion of the abdomen and metasternum is variable, it being very sparse and fine in the type and some of the other examples, and closer and much coarser in the single male seen from Guapiles. The variations in colour are as follows:—

- α. Body rufous, with black markings above and beneath, those on the prothorax consisting of a spot on the flanks before the middle, a lanciform median vitta, and an oblique streak on each side of it near the base; the scutellum black; the elytra with a patch below the shoulder, a larger one at the sides towards the apex, an oblique triangular spot on the disc near the middle of the suture, and a streak along the suture at the tip, black; femora, tibiæ, and rostrum rufous, the femora black at the apex.—COLOMBIA, Antioquia (type, ♂).
- β. Body rufous, and with black markings as in the type, except that the median streak on the prothorax is abbreviated behind and the two oblique marks on the disc are replaced by two large basal spots, and the spots on the outer part of the elytra are smaller; femora, tibiæ, and rostrum rufous. (Fig. 15).—COSTA RICA, Miravalles (♀).
- γ. Body beneath entirely, or in great part, and the legs, rostrum, and scutellum black; prothorax and elytra rufous, the former with two large spots at the base and one on the disc black, the elytra marked much as in the type (the submedian spot transverse in the Chiriqui specimens, and oblique and preceded by a short black streak in the one from Guapiles). (Fig. 13).—COSTA RICA, PANAMA (♂).
- δ. Body beneath, legs, rostrum, and scutellum black; the black markings on the prothorax and elytra largely extended—the two spots at the base of the prothorax coalescent and extending completely across, and also confluent with the median streak, the elytra with the humeral and submedian spots coalescent, and the sutural and subapical markings united into a large apical patch. (Fig. 14).—PANAMA (♂).

The rostrum (slightly injured in the type) is stout, moderately long, curved, and faintly punctured, and the broader basal portion is sharply grooved to the deep frontal fovea. The anterior and intermediate coxæ have each a small tuft of long erect fulvous hairs in both sexes. The length varies from 15–23 mm., the single female seen being very much smaller than the males. Chevrolat² incorrectly gives “Mexico” as the locality. We figure three specimens (two males from Chiriqui and a female from Costa Rica), all somewhat differently marked from the type.

10. *Cactophagus pulcherrimus*. (Tab. IV. figg. 16, 16 a, 17, ♂, vars.)

Sphenophorus pulcherrimus, Chevr. Ann. Soc. Ent. Fr. 1882, p. 579¹.

Phyllerythrus pulcherrimus, Chevr. op. cit. 1885, pp. 92, 93².

Hab. MEXICO^{1 2} (*Sallé, Mus. Brit.*).

Three specimens of this species are before me, all males—one with a greatly-developed crescentiform fascia on the prothorax (fig. 16) (enclosing a small black spot on the disc and extending down the middle to the base), one (the type) with the fascia less extended and acutely produced in the middle behind, and one with a straight transverse fascia of the same width as the interrupted band on the elytra below the base (fig. 17), these markings being of a ferruginous or orange colour. The rostrum is exceedingly stout, slightly curved, much shorter than the prothorax, closely punctate, shallowly sulcate at the base above; the prothorax is feebly bisinuate at the base;

the scutellum is large, flat, and triangular; the ventral excavation is long and broad; and the anterior coxæ are separated by about half their own width. The length varies from 10–11½, and the breadth 4½–5¼ mm.

CACTOPHAGOIDES, gen. nov.

Rostrum abruptly separated from the head above, very stout, cylindrical, arcuate, the basal portion sinuate at the sides and moderately widened, the peduncle of the submentum sulcate anteriorly, the two vertical lamellæ thus formed rounded at the end in both sexes; club of antenna large, flattened, rounded at the tip; prothorax abruptly and deeply excised on each side near the apex, strongly bisinuate at the base; scutellum triangular; elytra verrucose; pygidium large; mesothoracic epimera broad, obtuse above; anterior coxæ large and very narrowly, the intermediate coxæ more widely, separated; antero-intercoxal process of the metasternum flattened and subtruncate in front; femora and tibiæ feebly ciliate, the femora unarmed, the tibiæ rounded at the outer apical angle and with a long apical spur; third tarsal joint large, spongy-pubescent beneath; body elongate, broad, robust, very rugose above.

Type, *C. verrucosus*.

The two Costa Rican forms referred to this genus superficially resemble *Disodotogenus wollastoni*, Marshall*, from Ruwenzori, E. Africa, differing from it mainly in the non-dentate lateral lobes of the peduncle of the submentum in the female, the broader mesothoracic epimera, and the more strongly sinuate base of the prothorax and elytra. The very uneven verrucose upper surface is suggestive of that of certain species of the Tenebrionid-genus *Nosoderma*. The prothorax is abruptly excised at the sides in front, much as in *Cossonus spathula*.

1. *Cactophagoides verrucosus*, sp. n. (Tab. IV. figg. 18, 18 a, ♂.)

Somewhat convex, black, opaque, the depressions and punctures of the surface filled with a brown or greyish-brown incrustation. Rostrum about as long as the prothorax, coarsely, rugosely, confluent punctate to about the apical third in the ♂ and to near the middle in the ♀, the outer portion shining and very much smoother, the broader basal portion sulcate and somewhat tumid on each side above the eyes. Prothorax about as long as broad, sinuate and somewhat rounded at the sides from the base to the deep subapical excision and with a more or less distinct blunt tooth at about the middle; the surface impressed with very coarse, irregularly distributed, confluent punctures, the interspaces between which are here and there obliquely or sinuously raised, the broad depression on the basal portion of the disc bordered on each side by an oblique ridge, and also with an irregular ridge down the middle. Scutellum hollowed anteriorly, alutaceous. Elytra a little wider than the prothorax, rounded-subtriangular, the rows of punctures interrupted by three irregular series of large, elongate, tuberculiform elevations on the disc and other scattered prominences. Pygidium sparsely punctured, tumid and subcristate down the middle posteriorly. Beneath coarsely punctate, smoother along the centre of the abdomen in the ♂, the first ventral segment depressed down the middle and the fifth shallowly foveate at the apex in this sex. Anterior coxæ very narrowly, the intermediate pair moderately, separated. Femora and tibiæ fringed with very short hairs; the anterior and intermediate coxæ each with a cluster of erect hairs, the anterior pair also with a small tubercle on their inner face.

Length 15–20, breadth 5¾–8 millim. (♂ ♀.)

Hab. COSTA RICA, Rio Sucio, Irazu (*Rogers*), Miravalles (*Underwood*).

One male and two females.

* Trans. Zool. Soc. Lond. xix. pp. 231, 232, t. 7. fig. 19 (1909).

2. *Cactophagoides gibberosus*, sp. n. (Tab. IV. figg. 19, 19 a, ♂.)

Flattened above, black, opaque, the surface in great part covered with a brown incrustation. Rostrum as long as the prothorax, somewhat tapering outwards, the basal portion moderately widened, sulcate, and coarsely, confluent punctate, the apical portion shining and very sparsely, finely punctate, becoming rugose laterally towards the base. Prothorax as long as broad, subquadrate, sinuate at the sides, becoming a little narrower towards the deep subapical excision; the surface impressed with very coarse, confluent punctures, the interspaces between which are obliquely or sinuously raised, the disc broadly excavate in the middle posteriorly. Scutellum flattened. Elytra scarcely wider than the prothorax, subparallel at the base, rapidly narrowed from about the basal third; uneven, punctate-striate, each elytron with three stout, elongate elevations on the disc, together forming an interrupted oblique ridge (one on each of the interstices 2, 3, 4, that on 3 longer than the others), and the seventh interstice also raised from about the basal third to near the apex. Pygidium sparsely punctate, tumid along the middle. Beneath coarsely punctate; first ventral segment hollowed down the middle, the fifth shallowly foveate at the apex. Anterior coxæ rather narrowly separated, the intercoxal portion of the prosternum with an oblong prominence in the middle anteriorly; intermediate coxæ separated by nearly their own width.

Length 16, breadth $6\frac{1}{2}$ millim. (♂.)

Hab. COSTA RICA, Azahar de Cartago (*Underwood*).

One specimen, assumed to be a male. Flatter than *C. verrucosus*; the rostrum more tapering; the prothorax subquadrate, without longitudinal ridges on the disc and also wanting the blunt marginal tooth; the elytra with fewer longitudinal elevations on the disc (three only in an oblique series) and the rows of punctures less interrupted; the anterior and intermediate coxæ less approximate, the prosternum with an oblong prominence between the anterior pair.

PHYLLERYTHRURUS.

Sphenophorus (genre 38°, Calandrides), Chevrolat, Ann. Soc. Ent. Fr. 1882, p. 578 (part.) (in error).

Phyllerythrurus, Chevrolat, op. cit. 1885, p. 92 (part.) *.

Rostrum stout, arcuate, subcylindrical; peduncle of the submentum sulcate and vertically bilamellate as in *Cactophagus* and *Cactophagoides*; anterior coxæ very narrowly, the intermediate coxæ moderately separated; prosternum feebly developed behind the anterior coxæ; antero-intercoxal process of the metasternum triangular or subconical; femora unarmed; tibiæ rounded at the outer apical angle, fringed with extremely short hairs in both sexes; third tarsal joint largo, spongy-pubescent beneath; body rhomboidal or subfusiform, the prothorax or elytra with sanguineous or ochreous stripes or fasciæ.

Type, *Curculio sanguinolentus*, Oliv.

Chevrolat included five Tropical-American species under *Phyllerythrurus*, but the only character he gave for it was the red band at the base of the elytra. The genus includes numerous handsomely-marked Tropical-American forms, differing from *Eucactophagus* (type, *Calandra aurofasciata*, Brême) in the non-protuberant metasternum and the sulcate peduncle of the submentum, and from *Cactophagus* in the form of the antero-intercoxal process of the metasternum and the general rhomboidal

* The name is misprinted *Phylleruthrus* in the Zool. Record, 1885, Ins. p. 121, and the wrong volume quoted "(6) iv.," instead of "(6) v."

or subfusiform shape of the body. The sexes in most of the species are difficult to distinguish, the brushes of hairs on the tibiæ and last ventral segment (so conspicuous in certain *Cactophagi*) being absent in the males of all of them.

The Central-American forms may be grouped thus:—

- a. Elytra with a common sanguineous basal fascia, the 4th interstice gibbous at the base *sanguinolentus*, F.
- b. Elytra each with two fasciæ (the basal one bifurcate laterally), and the prothorax sometimes with a complete or interrupted subapical fascia also, sanguineous or fulvous *quadrinotatus*, sp. n.
- c. Elytra each with an oblique fulvous or ochreous fascia on the disc, the striæ straight *rectistriatus*, sp. n.
- d. Elytra each with an oblique line of small red, fulvous, or ochreous spots on the disc.
 - a¹. Prothorax and elytra also with velvety-black stripes, the ninth elytral stria sinuate between the spots *miniatopunctatus*, Chev.
 - b¹. Prothorax and elytra without velvety-black stripes, the elytral striæ 3-9 or 4-9 abruptly sinuate between the spots.
 - a². The oblique line of spots almost straight and terminating near the end of the 3rd interstice *sinuatus*, sp. n.
 - b². The oblique line of spots subangulate, terminating at about one-third from the end of the 3rd interstice *ornatus*, sp. n.
- e. Elytra each with an oblique fulvous stripe, which is continued obliquely forwards along the sides of the prothorax *circumjectus*, sp. n.
- f. Elytra with a common, saddle-shaped, annulus on the disc, and the prothorax with an oblique stripe on each side extending forwards to the subapical constriction, fulvous *annulatus*, sp. n.
- g. Elytra each with a very broad, oblique, fulvous band, the bands becoming almost coalescent at some distance before the apex and continued obliquely forwards along the sides of the prothorax *circumdatus*, sp. n.
- h. Elytra with an interrupted ochreous submedian fascia *xanthozona*, sp. n.

1. *Phyllerythrurus sanguinolentus*. (Tab. IV. figg. 20, 20 a, ♂.)

Curculio sanguinolentus, Oliv. Encycl. Méth. v. p. 473 (1790)¹; Fabr. Ent. Syst. i. 2, p. 398².

Calandra sanguinolenta, Oliv. Ent. v. no. 83, p. 83, t. 10. fig. 116 (*Curculio*)³; Fabr. Syst. Eleuth. ii. p. 434⁴.

Rhynchophorus sanguinolentus, Herbst, Käf. vi. p. 24, t. 61. fig. 6⁵; Schönh. Gen. Curc. iv. p. 986⁶.

Sphenophorus sanguinolentus, Chev. Ann. Soc. Ent. Fr. 1882, p. 578⁷.

Phyllerythrurus sanguinolentus, Chev. op. cit. 1885, pp. 92, 93⁸.

Hab. MEXICO (*Mus. Brit.*), Santa Rosa in Vera Cruz (*Schaus*, in *U.S. Nat. Mus.*); GUATEMALA (*coll. Fry*), Cubilguitz in Alta Vera Paz (*Champion*), Secanquin in Alta Vera Paz (*Pittier*, in *U.S. Nat. Mus.*), Panzos (*Conradt*); NICARAGUA (*U.S. Nat. Mus.*), Chontales (*Belt, Janson, Richardson*); COSTA RICA, Guapiles and San Carlos (*U.S. Nat. Mus.*); PANAMA, Chiriqui (*coll. Fry*).—TOBAGO¹⁻⁸.

A large, robust, rhomboidal form, black, with a bright sanguineous basal fascia to the elytra, the elytra themselves finely punctate-striate and with the fourth interstice widened and more or less gibbous at the base. The metasternum is broadly hollowed down the middle from a little below the subconical intercoxal process in both sexes, this depression being deeper and extending to the first two ventral segments in the male. The femora and tibiae have a fringe of short hairs and the pygidium is coarsely fusco-pilose at the tip.

2. *Phyllerythrurus quadrinotatus*, sp. n. (Tab. IV. figg. 21, 21 a, ♂.)

Elongate-subrhomboidal, robust, opaque above, black; the prothorax sometimes with a curved, transverse, subapical fascia, or an oblique transverse stripe on each side, and the elytra each with two transverse fasciae of variable breadth—one basal, becoming bifurcate outwards, and the other post-median, neither reaching the suture—sanguineous or ferruginous. Rostrum strongly arcuate, as long as the head and prothorax, very stout, rugosely punctate for about two-thirds of its length, smoother at the tip, the rather long, widened, basal portion narrowly sulcate up to the frontal fovea, the apical portion in the ♀ smoother from near the base. Prothorax nearly as long as broad, abruptly constricted in front, the sides arcuately converging anteriorly, the base bisinuate, the disc broadly depressed posteriorly, rather sparsely, finely punctate. Scutellum triangular, flattened. Elytra much wider than the prothorax, oblong-subcordate, finely punctate-striate, the interstices feebly convex or flat, the fourth and fifth swollen at the base. Pygidium and under surface sparsely punctate, the former somewhat tumid at the apex; ventral excavation long, broad, and deep in both sexes.

Length 21–22, breadth $9\frac{1}{10}$ – $9\frac{2}{5}$ millim. (♂ ♀.)

Hab. COSTA RICA, Cariblanco, Tuis 2400 feet (*Lankester, in coll. Godman and in U.S. Nat. Mus.*); PANAMA, Chiriqui (*coll. Fry*).

Four examples, varying in the colour of the prothorax and in the width of the elytral fasciae, the basal fascia, however, is bifurcate laterally in all of them. A very large form related to *P. sanguinolentus*, but more elongate, the elytra bifasciate, with the fourth and fifth interstices moderately swollen at the base. The non-protuberant metasternum, the shorter, stouter, more curved, rugose rostrum, &c., separate *P. quadrinotatus* from *Eucactophagus duplocinctus* (infra).

3. *Phyllerythrurus rectistriatus*, sp. n. (Tab. IV. figg. 22, 22 a, ♂.)

Somewhat fusiform, opaque above, black, pruinose; the elytra each with a humeral spot, and an oblique fascia on the disc extending from below the shoulder to about the middle of the second stria, sanguineous (the fascia ochreous in one specimen), these markings often coalescent beneath. Rostrum strongly arcuate, very stout, as long as the prothorax, sulcate and coarsely, closely punctate to about the middle, sparsely punctured thence to the tip, the sulcus deep along the abruptly-widened basal portion, the apical portion smoother in the ♀. Prothorax about as long as broad, obliquely narrowed anteriorly and slightly sinuate at the sides behind the middle, bisinuate at the base, transversely hollowed on the disc posteriorly, sparsely, finely punctate. Scutellum triangular, flat. Elytra much wider than the prothorax, oblong-subcordate, finely striate, the striae straight and with conspicuous scattered punctures, the interstices flat, obsoletely uniseriate-punctate. Pygidium sparsely punctured, subcarinate and setulose at the tip. Beneath very sparsely punctate; ventral excavation of the ♂ long and shallow.

Length 11–16½, breadth $4\frac{1}{2}$ –7 millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Belt, Janson*); COSTA RICA (*Van Patten*), Cariblanco 835 metres (*Lankester*); PANAMA, Chiriqui (*coll. Fry*).

Six examples. Very like *P. ornatus*, but with the oblique fascia on the elytra straighter and not formed by a row of distinctly-separated spots, the striae not sinuate, the rostrum more deeply sulcate towards the base above. The humeral spot is scarcely visible from above. The allied *P. circumjectus* has the oblique fascia on the elytra longer and placed at a different angle, and continued forwards along the sides of the prothorax.

4. *Phyllerythrurus miniatopunctatus*. (Tab. IV. figg. 23, 23 a, ♂.)

Cactophagus miniatopunctatus, Chevr. Ann. Soc. Ent. Fr. 1882, p. 580¹.

Somewhat fusiform, opaque above, black; the elytra each with seven or eight ferruginous or ochreous spots—three or four in an oblique line on the disc beyond the middle, two in a line with these on the outer margin below the humeri, one on the third and another on the fifth interstice below the base (placed transversely, both small), and one on the outer margin towards the apex; the prothorax with a broad, lanciform, basally-widened median vitta and an oblong patch at the sides, and the elytra with a stripe along the sides and a broader one on the disc (the latter extending from the two sub-basal spots to near the tip), velvety-black; the rest of the surface covered with a purplish or brownish-cinereous pruinosity. Rostrum stout, curved, about as long as the prothorax, rugosely punctate to about the middle, shallowly sulcate beneath in the ♂, the widened basal portion narrowly sulcate, the apical portion almost smooth from near the base in the ♀. Prothorax about as long as broad, subconical, bisinuate at the base, broadly depressed on the disc posteriorly, sparsely, finely punctate. Scutellum elongate-triangular, flattened. Elytra finely striate, the ninth stria sinuate and all with scattered small punctures, the interstices flat. Pygidium sparsely punctured, setulose. Beneath sparsely punctate; ventral segment 1 broadly flattened or depressed down the middle, and 5 transversely foveate at the apex, in the ♂. Femora with a few short erect hairs beneath.

Length 11–13, breadth $4\frac{1}{2}$ – $5\frac{1}{2}$ millim. (♂ ♀.)

Hab. MEXICO¹ (*Mus. Holm.*); GUATEMALA, Cubilguitz and San Juan in Alta Vera Paz (*Champion*); NICARAGUA, Chontales (*Janson*).

I have seen four examples of this species, including the type (♂), the one from Nicaragua with the small ferruginous spots on the disc of the elytra showing a tendency to surround a common, interrupted, heart-shaped, black patch. Viewed laterally, the velvety-black streaks are very conspicuous. The dense pruinosity modifies the colour of the rest of the dark portion of the surface.

5. *Phyllerythrurus sinuatus*, sp. n. (Tab. IV. figg. 24, 24 a, ♂.)

Somewhat fusiform, opaque above, black; the elytra each with a strongly sinuate oblique series of eight rather large fulvous spots extending around the lower portion of the humeri to near the apex of the third interstice (the humeral spot curved, elongate, and in great part hidden from above, the last two also elongate); the rest of the surface covered with a brownish-cinereous or bluish-grey pruinosity. Rostrum very stout, as long as the prothorax, strongly arcuate, rugosely punctate to near the tip, the latter almost smooth, the abruptly-widened basal portion narrowly sulcate up to the deep frontal fovea, the apical portion much smoother in the ♀. Prothorax as long as broad, somewhat conical, bisinuate at the base, broadly depressed on the disc posteriorly, very sparsely, finely punctate. Scutellum triangular, flattened. Elytra finely punctate-striate, the striae 4–9 abruptly sinuate between the fulvous spots, the interstices

flat, obsoletely uniseriate-punctate. Pygidium sparsely punctate, setulose. Beneath very sparsely punctate; ventral excavation of the ♂ broad, shallow, extending to the middle of the metasternum; fifth segment transversely foveate at the apex in both sexes. Femora with a few rather long erect hairs. Length $13\frac{1}{2}$ –17, breadth $5\frac{1}{2}$ – $6\frac{1}{2}$ millim. (♂ ♀.)

Hab. PANAMA, Volcan de Chiriqui 4000 feet (*Champion*).

Three examples. Distinguishable from the various allied forms by the very long sinuous oblique series of fulvous spots on each elytron and the abruptly sinuate striae.

6. *Phyllerythrurus ornatus*, sp. n. (Tab. IV. figg. 25, 25 a, ♀.)

Somewhat fusiform, opaque above, black, pruinose; the elytra each with a small humeral spot (wanting in the Bugaba specimen), and a sinuous, subangulate, oblique series of seven or eight irregular spots (the one on the fifth interstice larger than the rest) extending from below the shoulder to the second stria at about one-third from the apex, fulvous. Rostrum as in *P. sinuatus*, but with the apical portion smoother in the ♂. Prothorax and elytra as in *P. sinuatus*, the latter with the striae 3–9 abruptly sinuate between the spots. Ventral excavation of the ♂ long and deep, coarsely punctate, the fifth ventral segment foveate at the apex in this sex.

Length $11\frac{1}{2}$ –13, breadth $4\frac{3}{4}$ – $5\frac{1}{2}$ millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Belt, Janson*); PANAMA, Bugaba (*Champion*).—ECUADOR, Cachabé (*Rosenberg, in Mus. Brit.*).

Seven examples, the one from Bugaba (a ♀) wanting the humeral spot and having the rostrum shallowly grooved and ciliate beneath, and the one from Ecuador (a ♂) wanting the outer spot of the oblique series crossing the elytra. This insect appears to be the low country form of *P. sinuatus*; but it cannot be treated as a variety of that insect, the fulvous spots (which are sometimes tumid and shining) being placed in a different position, the larger oblong one on the fifth interstice giving an angulate appearance to the fascia. The hairs on the under surface of the rostrum in one example are perhaps due to its fresher condition.

7. *Phyllerythrurus circumjectus*, sp. n. (Tab. IV. figg. 26, 26 a, ♀.)

Somewhat fusiform, opaque above, black, bluish-grey-pruinose; the prothorax with an oblique stripe on each side, extending for some distance along the outer margin of the elytra, and then continued obliquely across the disc to the second stria at about one-fourth from the apex, fulvous, the very large triangular space enclosed on the elytra somewhat piceous. Rostrum very stout, arcuate, as long as the prothorax, closely punctate to near the tip in the ♂, the apical portion almost smooth in the ♀, the widened basal portion narrowly sulcate. Prothorax about as long as broad, subconical, obliquely narrowed anteriorly, bisinuate at the base, transversely depressed on the disc posteriorly, finely, somewhat closely punctate. Scutellum elongate-triangular, flattened. Elytra finely striate, the striae with widely-scattered fine punctures, the interstices flat, obsoletely uniseriate-punctate. Pygidium sparsely punctate, setulose, tumid along the middle posteriorly. Beneath very sparsely punctate; first ventral segment broadly excavate in the ♂. Femora with a few long erect hairs beneath.

Length 14–15, breadth $5\frac{1}{10}$ –6 millim. (♂ ♀.)

Hab. COSTA RICA, Cariblanco (*Lankester*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Four examples, one of the supposed females (with a comparatively smooth rostrum) having the first ventral segment as deeply excavate as in the male. The much narrower stripe on the prothorax and elytra, the more closely punctured prothorax, the widely separated punctures of the elytral striæ, and the subcarinate pygidium distinguish this species from *P. circumdatus*; and the extended, differently-placed stripe separates it from *P. rectistriatus*. A closely allied unnamed form with the stripe extending along the fifth elytral interstice to the tip, &c., occurs in Ecuador.

8. *Phyllerythrurus annulatus*, sp. n. (Tab. IV. figg. 27, ♀; 28, 28 a, ♂, var.)

Somewhat fusiform, rather broad, opaque above, black, pruinose; the prothorax with a broad, strongly oblique fascia on each side of the disc (the two fasciæ coalescent just behind the apical constriction), and the elytra with a common, transverse, sharply-defined, saddle-shaped annulus, extending from a little below the base to about one-fourth from the apex and reaching the outer margin, fulvous or ochreous, the large enclosed space on the elytra sometimes fusco-castaneous or brown. Rostrum very stout, feebly curved, short, a little more than half the length of the prothorax, closely punctate to near the tip, the slightly widened basal portion narrowly sulcate, the apical portion much smoother in the ♀. Prothorax about as long as broad, obliquely narrowed anteriorly, feebly bisinuate at the base, transversely depressed on the disc posteriorly, sparsely, finely punctate. Scutellum elongate-triangular, flattened. Elytra very finely punctate-striate, the interstices flat, obsoletely uniseriate-punctate. Pygidium and under surface sparsely punctured. Ventral excavation broad and deep in the ♂, shallower in the ♀.

Length $11\frac{1}{2}$ –16, breadth $4\frac{2}{3}$ – $6\frac{2}{3}$ millim. (♂ ♀.)

Hab. COSTA RICA, Cariblanco (*Lankester*), Savanillas de Pirris (*Underwood*); PANAMA, Volcan de Chiriqui 4000 feet (*Champion*).

Six examples, the four from Costa Rica with the space on the elytra enclosed by the annulus brownish or fusco-castaneous, this portion being black in the two from Panama. The rostrum is as short as in *Cactophagus pulcherrimus*.

9. *Phyllerythrurus circumdatus*, sp. n. (Tab. IV. figg. 29, 29 a, ♂.)

Somewhat fusiform, opaque above, black, pruinose; the prothorax with a broad oblique stripe on each side extending forward to the subapical constriction, and the elytra with a still broader curved band extending down the outer portion from the base to very near the suture beyond the middle (leaving a common, elongate, subtriangular patch on the basal half and the apex black), fulvous. Rostrum stout, strongly arcuate, somewhat abruptly bowed at the tip, as long as the prothorax, coarsely and rather closely punctured to about the middle and almost smooth at the apex, the widened basal portion feebly sulcate between the points of insertion of the antennæ, the apical portion smoother in the ♀, the bilamellate peduncle of the submentum very prominent anteriorly, the frontal fovea oblong. Prothorax as long as broad, narrowing from the base, the sides obliquely converging anteriorly, the base bisinuate, the disc transversely depressed posteriorly, very sparsely, finely punctate. Scutellum elongate-triangular, flattened. Elytra obliquely narrowing from the rounded humeri, very finely punctate-striate (the punctures on the fulvous portion indicated by a larger and darker spot), the interstices flat. Pygidium rather convex, sparsely punctured. Beneath very sparsely punctate; metasternum broadly excavate down the middle from a little below the subconical intercoxal process, the excavation continued along the first ventral segment in the ♂, the fifth segment foveate at the apex in this sex. Femora with a few short erect hairs beneath.

Length 12–13, breadth $4\frac{9}{10}$ – $5\frac{1}{10}$ millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Belt, Janson, Richardson*); COSTA RICA, Miravalles (*Underwood*), Zent, Atlantic slope (*Pittier*).

Seven specimens, showing no sign of variation. The system of coloration of this insect is very like that of certain species of the genus *Ambates*.

10. *Phyllerythrurus xanthozona*, sp. n. (Tab. IV. figg. 30, 30 a, ♂.)

- ♂. Fusiform, opaque above, black, the elytra each with a rather broad, oblique, outwardly-widened, ochreous fascia just before the middle. Head closely punctate; rostrum very stout, curved, much shorter than the prothorax, the abruptly-widened basal portion closely punctate and profoundly sulcate, the outer portion much smoother. Prothorax as long as broad, subconical, somewhat dilated at a little before the middle (the sides appearing sinuate behind), bisinuate at the base, very sparsely and somewhat coarsely punctate, the disc broadly excavate posteriorly. Scutellum large, flat, triangular. Elytra moderately long, rounded-subtriangular, finely punctate-striate, the interstices obsoletely uniseriate-punctate. Pygidium coarsely punctate, subcarinate at the tip. Beneath sparsely punctate; ventral excavation broad and very deep, extending forwards along the metasternum for about two-thirds of its length.
- Length $10\frac{3}{4}$, breadth $4\frac{1}{10}$ millim.

Hab. GUATEMALA, Senahu in Alta Vera Paz (*Champion*).

One male. In this species the rostrum is comparatively short, profoundly sulcate at the base above; the prothorax is subconical, deeply excavate on the disc; and the ochreous fascia on each elytron is oblique and widened outwards.

EUCACTOPHAGUS, gen. nov.

Peduncle of the submentum narrow, not sulcate or vertically bilamellate in front; metasternum conically protuberant or tumid between the more or less widely separated intermediate coxæ; anterior coxæ narrowly separated; the other characters as in *Phyllerythrurus*.

Type, *Calandra aurofasciata*, Brême.

The protuberant antero-intercoxal process of the metasternum (a character not noted by Chevrolat in his description of *E. orizabensis*) is the chief peculiarity of the typical members of the present genus. In *E. aurocinctus* this feature is reduced to a minimum, but as that species is undoubtedly nearly allied to *E. graphipterus* it is best placed here. Two groups of species are indicated—one with reddish or ochreous markings on the elytra, the other with a large velvety-black patch on each wing-case. The pygidium is more or less raised or subcarinate down the middle. The male-characters are feeble, as in *Phyllerythrurus*. The species may be tabulated thus:—

a. Metasternum protuberant anteriorly.

*a*¹. Elytra fasciate or maculate.

*a*². Elytra with two sanguineous or ochreous fasciæ *duplocinctus*, sp. n.

*b*². Elytra with a single broad ochreous fascia *orizabensis*, Chevr.

*c*². Elytra with a common, saddle-shaped, ochreous, fusco-trimaculate patch extending to beyond the middle *graphipterus*, sp. n.

*b*¹. Elytra and prothorax pruinose, the elytra each with a large velvety-black patch on the disc.

*d*². Metasternum strongly protuberant, the black patch on the elytra rounded *carinipyga*, sp. n.

- e*². Metasternum moderately protuberant, the black patch on the elytra elongate *pruinus*, sp. n.
b. Metasternum feebly swollen anteriorly; elytra with an angulate ochreous fascia below the base, sometimes obsolete *aurocinctus*, sp. n.

1. **Eucactophagus duplocinctus**, sp. n. (Tab. IV. figg. 31, 31 *a*, ♂; 32 ♂, 33, ♀, vars.)

Oblong-rhomboidal, opaque above, black, the elytra with two transverse sanguineous fasciæ of variable width and development (sometimes reduced to three or four spots, and sometimes broad and almost reaching the suture and outer margin)—one a little below the base and the other far beyond the middle. Rostrum stout, arcuate, in some specimens fully half the length of the body, obsoletely punctate. Prothorax a little broader than long, conical, strongly bisinuate at the base, very sparsely, finely punctate, the disc broadly excavate in the middle behind. Scutellum large, triangular, arcuate-emarginate in front. Elytra oblong-subcordate, finely striate, the striæ very feebly punctate. Pygidium sparsely punctate, and with a stout fusco-pilose median ridge. Beneath very sparsely, finely punctate, smoother down the middle. Metasternum strongly protuberant. First ventral segment slightly hollowed down the centre in the ♂. Anterior tibiæ fringed with rather longer hairs in the ♂ than in the ♀.

Var. *α*. The elytral fasciæ broader, subangulate, ochreous. (Fig. 32.) [Chiriqui, one large ♂.]

Var. *β*. The elytral fasciæ rather narrow, sanguineous, the anterior one complete and enclosing a small black humeral spot; the femora and tibiæ sanguineous to near the tip. (Fig. 33.) [Mexico, one small ♀.]

Length 15-24, breadth 6 $\frac{1}{10}$ –10 $\frac{1}{2}$ millim. (♂ ♀.)

Hab. MEXICO, Santacomapan in Vera Cruz (*Sallé*: var. *β*); GUATEMALA (*coll. Fry*); NICARAGUA, Chontales (*Belt, Janson*); COSTA RICA, Caché (*Rogers*), Miravalles (*Underwood*); PANAMA, Chiriqui (*Trötsch*: type and var. *α*).

Twelve specimens in all have been seen of this species, varying as above described, the ochreous colour of the fasciæ in one example being perhaps due to immaturity. The arcuate-emarginate scutellum and bifasciate elytra readily distinguish *E. duplocinctus*.

2. **Eucactophagus orizabensis**. (Tab. IV. figg. 34, 34 *a*.)

Sphenophorus orizabaensis, Chevr. Ann. Soc. Ent. Fr. 1882, p. 578¹.

Phyllerythrurus orizabaensis, Chevr. op. cit. 1885, pp. 92, 93².

Rhomboidal, broad, robust, opaque above, black, the elytra with a broad, shining, transverse, ochreous fascia before the middle, the fascia narrowing inwards and almost or quite reaching the suture, the abdomen sometimes with a small reddish spot on each side of the pygidium. Rostrum arcuate, very stout, as long as, or a little longer than, the prothorax, gradually thickened basally, sparsely, finely punctate, the frontal fovea small. Prothorax conical, slightly broader than long, strongly bisinuate at the base, finely punctate, the disc broadly and deeply excavate posteriorly. Scutellum elongate-triangular, flat. Elytra much wider than the prothorax, cordate, finely punctate-striate, the interstices flat, convex and shining on the ochreous portion of the surface. Pygidium sparsely punctate, and with a stout median ridge. Beneath very sparsely punctate; first ventral segment broadly subdepressed in the ♂. Prosternum with a compressed tubercle between the anterior coxæ. Metasternum strongly protuberant. Tibiæ with a dense fringe of very short hairs. Tarsi with a few scattered long bristly hairs above.

Length 15-16*, breadth 7-7 $\frac{3}{5}$ millim.

* The length is given as 10 mm. by Chevrolat, evidently a misprint for 16 mm.

Hab. MEXICO (*Mus. Brit.*), Orizaba (*Sallé*); GUATEMALA, Tamahu in Vera Paz (*Champion*).

The three examples of this species before me are assumed to include both sexes. *E. orizabensis* is a northern representative of the Colombian *E. aurofasciatus*, Brême, from which it mainly differs in the position of the elytral fascia and the flatter scutellum.

3. *Eucactophagus graphipterus*, sp. n. (Tab. IV. figg. 35, 35 a, ♀.)

Oblong-subelliptic, broad, robust, opaque, black, the elytra with a very broad, common, irregular, narrowly interrupted, saddle-shaped, ochreous patch, extending from a little below the base to near the apex and enclosing a common, transverse, fusco-castaneous patch at the middle of the suture and a spot on the disc between it and the shoulder, the punctures on this portion of the surface black. Rostrum very stout, arcuate, about as long as the prothorax, closely punctate, shallowly sulcate beneath in the ♂, the widened basal portion narrowly grooved above, the frontal fovea deep. Prothorax a little broader than long, the sides parallel behind and strongly rounded anteriorly, the base deeply bisinuate and with the median lobe considerably produced; very sparsely, finely punctate, the disc broadly depressed posteriorly and with two widely-separated foveæ at about the middle. Scutellum rather small, elongate-triangular, flattened. Elytra much wider than the prothorax, subcordate, finely striate, the striæ with scattered coarse punctures, the interstices feebly convex. Pygidium sparsely punctured, subcarinate. Beneath very sparsely punctate; first ventral segment hollowed down the middle in the ♂. Metasternum strongly protuberant.

Length 16–17, breadth $7\frac{2}{5}$ –8 millim. (♂ ♀.)

Hab. COSTA RICA, Miravalles (*Underwood*: ♀).—COLOMBIA (*coll. Fry*: ♂).

Two specimens, with the markings very similar*. The latter form an irregular saddle-shaped patch occupying at least half the length of the elytra, enclosing a common transverse sutural spot, two smaller spots on the disc, and a small dot on each of the seriate punctures. The median basal lobe of the prothorax impinges on the scutellar cavity.

4. *Eucactophagus carinipyga*, sp. n. (Tab. V. figg. 1, 1 a, b, ♀.)

Elongate-rhomboidal, opaque above, black, cinereo-pruinose, the elytra each with a very large velvety-black patch on the disc a little before the middle extending inwards to near the suture. Rostrum feebly curved, moderately stout, much longer than the head and prothorax, obsoletely punctate, gradually widened towards the base, the frontal fovea small. Prothorax nearly as long as broad, conical, strongly bisinuate at the base, broadly and deeply excavate on the disc posteriorly, sparsely, finely punctate. Scutellum large, triangular, flattened. Elytra oblong-subcordate, much wider than the prothorax, transversely depressed at the base; very finely punctate-striate, the interstices flat, each with an irregular line of excessively minute punctures. Pygidium (fig. 1 b) sparsely punctate, and with a stout, prominent, median ridge. Beneath very sparsely punctured, almost smooth down the middle of the metasternum and abdomen. Metasternum strongly protuberant.

Length 17–18, breadth $6\frac{3}{4}$ – $7\frac{1}{2}$ millim. (♀.)

Hab. NICARAGUA, Chontales (*Janson, Richardson*).

Two females, both somewhat worn. In this insect the rostrum (♀) is very elongate, feebly curved, and obsoletely punctate, the metasternal protuberance is greatly developed,

* There is also an example in the U.S. Nat. Mus., found by Prof. Britton in a greenhouse in Connecticut.

the pygidial carina is very prominent, and the velvety-black patch on the disc of each elytron extends to about one-third of their length.

5. *Eucactophagus pruinus*, sp. n. (Tab. V. figg. 2, 2 a, ♂.)

Elongate-rhomboidal, opaque above, black, densely bluish-grey-pruinose, the elytra each with a very large, oblong, velvety-black patch on the disc extending from a little below the base to far beyond the middle and nearly reaching the suture and outer margin. Rostrum strongly arcuate, very stout, a little longer than the head and prothorax, closely, coarsely punctate, smooth at the tip, narrowly sulcate along the somewhat abruptly widened basal portion up to the deep frontal fovea, in the ♂ flattened at the apex above and subangulate behind the peduncle beneath, in the ♀ subcylindrical and a little smoother at the tip. Prothorax conical, about as long as broad, flattened on the disc posteriorly, moderately sinuate at the base, very sparsely, finely punctate. Scutellum large, elongate-triangular, flattened. Elytra a little wider than the prothorax, rapidly narrowing from the rounded humeri; very finely punctate-striate, the interstices flat, each with an irregular line of excessively minute punctures. Pygidium sparsely punctate, carinate from about the middle to the tip. Beneath very sparsely, the shallow ventral excavation of the ♂ more coarsely, punctate, the fifth segment with a transverse fovea at the apex in this sex. Metasternum feebly protuberant.

Length $16\frac{1}{2}$ –18, breadth $6\frac{1}{2}$ – $7\frac{1}{2}$ millim. (♂ ♀.)

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

One pair. This insect resembles the Nicaraguan *E. carinipyga*, but it has a much stouter, coarsely punctate, strongly curved rostrum, the prothorax more feebly bisinuate at the base and with the disc simply flattened, the elytra less widened anteriorly, the pygidium more feebly carinate, and the metasternal protuberance much less developed.

6. *Eucactophagus aurocinctus*, sp. n. (Tab. V. figg. 3, 3 a, ♀.)

Subrhomboidal, broad, opaque, black, the elytra each with a transverse, irregular, ochreous fascia of variable width (in one specimen running forwards for a short distance along the sixth, and in the other running downwards along the fourth, interstice) before the middle extending from the first stria to near the outer margin, the punctures above each bearing an extremely minute scale, those crossing the fascia black. Head closely punctate; rostrum very stout, strongly arcuate, about as long as the prothorax, closely, rather coarsely punctate, shallowly sulcate beneath, the widened basal portion obsolete grooved above. Prothorax broader than long, strongly rounded at the sides anteriorly, deeply bisinuate at the base; very sparsely, finely punctate, the disc broadly hollowed in the centre posteriorly and with two widely-separated shallow foveæ at about the middle. Scutellum rather small, triangular, flattened. Elytra much wider than the prothorax, subcordate, the subapical callosities rather prominent; finely striate, the striæ with coarse, deep, foveiform, scattered punctures, the interstices somewhat convex or uneven. Pygidium and under surface sparsely punctate, the pygidium slightly raised along the middle posteriorly; ventral excavation of the ♂ broad, extending to the metasternum. Metasternum feebly triangularly swollen between the middle coxæ.

Var. Entirely black, the punctures on the prothorax filled with a whitish incrustation, those along the elytral striæ large and very deep, the subapical callosities not prominent.

Calandra albipunctata, Sturm, in litt.

Length $10\frac{3}{4}$ – $12\frac{1}{2}$, breadth 5– $5\frac{1}{2}$ millim. (♂ ♀.)

Hab. MEXICO (*ex coll. Sturm*: var., ♀); NICARAGUA, Chontales (*Belt*: ♂); COSTA RICA (*Zeledon*, in *U.S. Nat. Mus.*: ♀).

Three specimens—two from Nicaragua and Costa Rica respectively with an ochreous fascia on the elytra and one from Mexico wholly black. Not unlike *E. graphipterus*, but much smaller, the median lobe of the prothorax less produced, the metasternum not protuberant. The elytral sculpture is similar to that of *Cactophagus striatoforatus*. Sturm's MS. name is misleading and best ignored. An allied form occurs in Peru. The Costa Rican example is figured.

ÆTHES.

Æthes, Chevrolat, Ann. Soc. Ent. Fr. 1882, p. 583.

The type of this genus is an extraordinary insect totally unlike any American form known to me, and it is probable that it will prove to be of eastern origin, and not from Mexico as stated, some mistake having perhaps been made in labelling. The principal characters of *Æthes* are:—

Rostrum stout, curved, sulcate and hairy beneath in ♂, feebly dilated at the apex, deeply sulcate at the base above, the slightly widened basal portion short; peduncle of the submentum narrow, flattened, shallowly sulcate; antennal club flattened, moderately large, bluntly rounded at the tip, the opaque apical portion short; prothorax obliquely truncate on each side at the base and armed with two short spines on each side at the apex (♂); scutellum small, oblong-subtriangular; elytra oblong, separately rounded at the apex, the dorsal interstices subcostate anteriorly; pygidium broad, raised at the sides and carinate down the middle, pilose; anterior coxæ narrowly, the intermediate coxæ widely, separated; prosternum with a bilobate overlapping basal process; metasternum flattened, the intercoxal process bisinuate in front; femora unarmed, feebly sinuate and very hairy beneath; tibiæ toothed at the outer apical angle, densely ciliate within, the hairs longer on the anterior pair (♂); tarsi with joints 1-3 spongy-pubescent beneath, 3 very large; body elongate-elliptic, flattened above, covered with a dense incrustation relieved by large velvety-black patches on both the prothorax and elytra.

1. *Æthes spinicollis*. (Tab. V. figg. 4, 4 α, ♂.)

Æthes spinicollis, Chevr. Ann. Soc. Ent. Fr. 1882, p. 583¹.

♂. Ventral segment 1 broadly depressed down the middle, 5 also excavate posteriorly and furnished at the apex with two clusters of erect fulvous hairs. For other characters, as to clothing of the femora, tibiæ, and rostrum, and the armature of the prothorax (some of which are certainly peculiar to the ♂), see the definition of the genus, *supra*.

Hab. MEXICO (*coll. Chevrolat, ex coll. Lacordaire*¹).

The unique type (♂) of this species has been kindly communicated by Dr. Sjöstedt, of the Stockholm Museum, and we take the opportunity of figuring it. "*Sphenophorus*" *dehaani*, Gyll. (a species not mentioned by Chevrolat in his papers on the genus), and its allies, from Java, &c., seem to be somewhat nearly related to *Æthes*.

METAMASIOPSIS, gen. nov.

Rostrum stout, curved, cylindrical, the antennæ inserted very near the base, the widened basal portion short; peduncle of the submentum narrow, not sulcate, sometimes with an angular or tuberculiform prominence anteriorly; scutellum long, narrow; pygidium large, prominent; anterior coxæ moderately, the intermediate coxæ much or less widely, separated; prosternum considerably developed behind the coxæ, the

basal overlapping portion deeply sulcate down the middle; metasternum flattened, broad and bisinuate in front; femora subclavate, smooth or very sparsely punctate; tibiæ toothed at the outer apical angle (fig. 5*b*), fringed with extremely short hairs on the inner edge; third tarsal joint moderately large, spongy-pubescent beneath; body elongate-elliptic or subfusiform, the elytra spotted or fasciate.

Type, *M. rugipectus*.

The three Mexican forms referred to this genus are closely related to *Metamasius* (type, *Calandra sericea*, Oliv.), but differ from it in having the tibiæ toothed at the outer apical angle. There are various S.-American species, including *Sphenophorus costatus*, Waterh., from Colombia, *Heterotoxus transatlanticus*, Kirsch, from Ecuador (the type of which I have seen *), with similarly formed tibiæ, but these southern insects have the femora abruptly excavate and dentate towards the apex.

The three species of *Metamasiopsis* are separable thus:—

- a.* Prosternum rugose and clothed with minute hair-like scales; anterior and intermediate coxæ moderately separated; rostrum and legs short, the femora very sparsely punctate; elytra each with two curved transverse lines of small ochreous spots on the disc; pygidium very prominent *rugipectus*, sp. n.
- b.* Prosternum very sparsely punctate, bare; anterior and intermediate coxæ more widely separated; rostrum and legs longer, the femora almost smooth and glabrous.
 - a*¹. Elytra each with two angular ochreous fasciæ on the disc . . . *flavopictus*, sp. n.
 - b*¹. Elytra each with two transverse lines of small ochreous spots on the disc *decempunctatus*, sp. n.

1. *Metamasiopsis rugipectus*, sp. n. (Tab. V. figg. 5, 5*a*, *b*, ♀.)

Elongate, fusiform, rather narrow, convex, subopaque and alutaceous above; black, the elytra each with a curved transverse series of small ochreous spots below the base, two small, oblong, similarly-coloured, obliquely-placed spots on the disc beyond the middle (one on the third and the other on the fifth interstice), and an oblong ferruginous streak near the apex. Head sparsely, finely punctate, the frontal fovea small; rostrum moderately stout, curved, barely half the length of the prothorax, very finely, sparsely punctate, the peduncle of the submentum with a compressed prominence at the apex. Prothorax considerably longer than broad, slightly rounded at the sides, feebly bisinuate at the base, gradually narrowing anteriorly; impressed with extremely minute widely-scattered punctures, those in front of the scutellum larger and deeper. Scutellum elongate-triangular, narrow, flat, and impressed with a row of transverse punctures. Elytra a little wider than the prothorax, oblong-subcordate, separately rounded at the apex; crenate-striate, the interstices convex, each with a row of very minute punctures down the middle. Pygidium long, porrect, very coarsely punctate, subcarinate. Beneath somewhat thickly punctate along the sides, the prosternum transversely rugose and set with minute hair-like scales, the ventral segments unimpressed. Legs short; femora very sparsely punctate.

Length 12, breadth 4 millim. (♀.)

Hab. MEXICO, Cerro de Palmas † (*Höge*).

* *Heteroxus*, Lac., type *H. gratus*, Lac., from Java, is unknown to me, and the Ecuador insect does not possess several of the characters assigned to that genus.

† Incorrectly given as "Cerro de Plumas" in various places in the preceding volumes of this work, owing to a mistake in labelling.

One specimen. Recognizable by the comparatively short rostrum, the long prothorax, the rather small, narrow scutellum, the crenate-striate, ochreo-maculate elytra, the prominent, coarsely sculptured pygidium, the rugose subpilose prosternum, the comparatively short legs, and the moderately separated anterior and intermediate coxæ. *M. rugipectus* bears a certain resemblance to *Heterotoxus transatlanticus*, Kirsch, but that insect has sharply-toothed femora, more hairy tarsi, &c.

2. *Metamasiopsis flavopictus*, sp. n. (Tab. V. figg. 6, 6 a, ♂.)

Elongate-elliptic, somewhat convex, opaque above, shining along the middle beneath, subglabrous; black, the elytra each with two angulate, transverse, ochreous fasciæ on the disc (one before and the other just beyond the middle, the anterior one extending forwards, and the posterior one downwards, on the fifth interstice), the covered dorsal portion of the abdomen ferruginous. Rostrum stout, curved, cylindrical, much shorter than the prothorax, very sparsely, minutely punctate, smooth at the tip, shallowly sulcate beneath, the frontal fovea conspicuous. Prothorax a little longer than broad, gradually narrowing from the middle, bisinuate at the base, flattened on the disc, and with very minute scattered punctures. Scutellum elongate-triangular, narrow, hollowed down the middle. Elytra considerably wider than the prothorax, finely punctate-striate. Pygidium rather convex, coarsely punctate, fulvo-cristate at the tip. Beneath very sparsely punctate; ventral excavation rather deep, the fifth segment with a few short hairs at the tip. Femora almost smooth, glabrous.

Length $12\frac{1}{2}$, breadth $4\frac{1}{2}$ millim. (♂.)

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

One specimen. Easily recognizable by the two angulate, transverse, ochreous fasciæ on the disc of each elytron, the long and comparatively smooth prothorax, the tooth at the outer apical angle of the tibiæ, &c. This species is not unlike *Metamasius callizona* (Chevr.), but the elytra are less widened anteriorly (the general shape being more oblong) and irregularly bifasciate on the disc, &c.

3. *Metamasiopsis decempunctatus*, sp. n. (Tab. V. figg. 7, 7 a, ♀.)

Elongate-elliptic, opaque above; black, the elytra each with five small ochreous spots—three placed in a transverse row before (on the interstices 3, 5, and 7), and two in a more oblique line beyond (on the interstices 3 and 5), the middle; the prothorax in one specimen (♂) with a patch on each side behind and two very faint spots in the middle at the base, rufous. Rostrum stout, cylindrical, curved, about two-thirds the length of the prothorax, very sparsely obsolete punctate, smooth at the tip, distinctly sulcate beneath in the ♂, feebly so in the ♀, the frontal fovea small. Prothorax a little longer than broad, gradually narrowing from the middle, flattened on the disc, with a few scattered punctures at the base. Scutellum elongate-triangular, narrow, hollowed down the middle anteriorly. Elytra much wider than the prothorax, gradually narrowed from the rounded humeri, finely punctate-striate, the punctures distant one from another, the interstices feebly convex. Pygidium sparsely punctate, subcristate at the apex. Beneath very sparsely punctured; ventral excavation long, deep, and almost smooth in the ♂, nearly obsolete in the ♀. Femora smooth, glabrous.

Length $13\frac{1}{2}$ – $15\frac{1}{4}$, breadth $4\frac{1}{2}$ – $5\frac{1}{2}$ millim. (♂ ♀.)

Hab. MEXICO, Cinco Señores (*Sallé*), Jalapa (*Höge*).

One pair. This is the only Central-American species of the present section with five small ochreous spots arranged in two transverse series on the disc of each elytron.

The rufous patches on the prothorax are evanescent, as in *Cactophagus spinolæ*. The tooth at the outer apical angle of the tibiæ is less developed than in *M. flavopictus*, of which *M. decempunctatus* may prove to be an extreme form.

METAMASIUS.

Metamasius, Horn, Proc. Am. Phil. Soc. xiii. pp. 408, 410 (1873); Leconte, op. cit. xv. p. 331.

This genus, the type of which is *Calandra sericea*, Oliv., includes a large number of Tropical American forms, in addition to those here enumerated *. Its chief characters are:—The narrow, flattened, or obsoletely grooved peduncle of the submentum, which is sometimes angular in front; the more or less widely separated anterior and intermediate coxæ; the strongly developed basal portion of the prosternum, which overlaps the front of the mesosternum and is always sulcate down the middle posteriorly; the broad, flattened, bisinuate, antero-intercoxal portion of the metasternum; the rounded outer apical angle of the tibiæ; and the large, spongy-pubescent, third tarsal joint. As in *Cactophagus*, some of the species possess special marks of distinction in the male-sex, such as the grooved and bluntly serrate under surface of the rostrum, a fringe of long hairs on the anterior or posterior tibiæ, a tuft of hairs on the posterior tibiæ, hairs on the prosternum or last ventral segment, &c. The body is usually maculate with rufous or ochreous, but wholly black forms of the same species sometimes occur. The extremely variable *M. sericeus* is known to attack sappy trunks of Musaceous plants and some of the allied forms may have similar habits.

The following table, mainly based on male-characters, will assist in the identification of the numerous Central-American members of the genus:—

- a. Prosternum in front of coxæ, a space on the 5th ventral segment, femora, and tibiæ clothed or fringed with long hairs, and the rostrum angulate near the tip beneath, in the ♂, the 5th ventral segment bifasciculate at apex in the ♀; elytra much widened anteriorly: colour very variable. *sericeus*, Oliv. †.
- b. Prosternum without long hairs in ♂.
 - a¹. Body much flattened above; tibiæ feebly sinuate within, the posterior pair fringed with long hairs in ♂.
 - a². Rostrum sulcate and erenate beneath in ♂; prothorax and elytra rufous, spotted or variegated with black *dimidiatipennis*, Jek.
 - b². Rostrum obsoletely sulcate beneath in ♂; prothorax and elytra black, interruptedly lineate with ochreous or ferruginous . . . *quadrilineatus*, sp. n.
 - b¹. Body moderately flattened above; prothorax longer than broad, sinuously swollen along the outer margin at about the middle, and trifoveate on the disc posteriorly; tibiæ curved, all fringed with

* Such as the following species placed under *Sphenophorus* in the Munich Catalogue:—*hemipterus*, L., *cinnamomeus*, Porty, *obsoletus*, *rimoratus*, *melancholicus*, Gyll., *ensirostris*, Germ., &c.; also *S. signiventris*, Kirsch.

† *M. hemipterus* (L.) and *M. ensirostris* (Germ.) also belong to this section.

- very short hairs in both sexes; prothorax and elytra ferruginous, interruptedly lineate with black *polygrammus*, Gyll.
- c*¹. Body somewhat convex above.
- c*². Rostrum longer than the prothorax, rather slender, feebly curved; prothorax conical.
- a*³. Elytra each with a very small fulvous spot on the disc, scarcely diverting the striae; rostrum feebly sulcate and crenulate beneath, and the anterior tibiae fringed with long hairs, in ♂ . . . *biguttatus*, sp. n.
- b*⁵. Elytra each with two large, oblong, approximate, fulvous spots on the disc, diverting the striae. [♂ unknown.] *bigeminatus*, sp. n.
- d*². Rostrum not longer than the prothorax.
- a*⁵. Elytra much widened anteriorly.
- a*⁴. Prothorax rounded at the sides anteriorly; tibiae feebly sinuate within: species larger.
- a*⁵. Elytra each with a rather broad, ante-median, ochreous or rufous fascia; metasternum much smoother; posterior tibiae fringed with moderately long hairs in ♂ *sellatus*, sp. n.
- b*⁵. Elytra each with a narrow red median fascia; metasternum more closely punctate; posterior tibiae with a small tuft of long hairs in ♂ *fasciatus*, Oliv.
- b*⁴. Prothorax subconical; elytra cordate, with a very large, common, fulvous, saddle-shaped patch extending to near the apex; tibiae curved, the posterior pair fringed with extremely short hairs: species small *scutiger*, sp. n.
- b*³. Elytra less widened anteriorly, general shape more oblong.
- c*⁴. Rostrum sharply and deeply sulcate beneath, and the posterior tibiae fringed with short hairs, in ♂: body black *sulcirostris*, sp. n.
- d*⁴. Rostrum sulcate, and more or less crenate or serrate, beneath in ♂; body elongate, rufo-variegate above.
- a*⁵. Prothorax almost smooth.
- a*⁶. Posterior tibiae with a tuft of long curled hairs in ♂ . . . *cincinnatus*, sp. n.
- b*⁶. Posterior tibiae fringed with long hairs in ♂ *connexus*, sp. n.
- b*⁵. Prothorax and under surface closely punctate; anterior tibiae fringed with long hairs in ♂; pygidium hairy at tip. . . . *dasyurus*, sp. n.
- c*⁵. Prothorax, elytral interstices, and under surface closely, coarsely punctate; all the tibiae fringed with very short hairs in both sexes *submaculatus*, sp. n.
- e*⁴. Rostrum, at most, feebly or obsoletely sulcate, and sometimes subcrenulate, beneath in ♂.
- d*⁵. Under surface and prothorax smoother.
- c*⁶. Under surface sparsely, finely punctate; metasternum immaculate; posterior tibiae fringed with long or moderately long hairs in ♂*.

* The female only is known of *M. ochreofasciatus* and *M. octonotatus*, and they may be wrongly placed in this Table.

- a*⁷. Prothorax black.
- a*⁸. Elytra with a post-basal ochreous fascia *cullizona*, Chevr.
- b*⁸. Elytra with a submedian narrow ochreous fascia . . . *ochreofasciatus*, sp. n.
- c*⁸. Elytra obliquely rufo-bifasciate on the disc . . . *nudiventris*, sp. n.
- b*⁷. Prothorax rufo-vittate, the elytra ferruginous, spotted with black, and also with a common, interrupted, saddle-shaped, ochreous patch *scutatus*, sp. n.
- e*⁸. Under surface sparsely, coarsely punctate; metasternum, prothorax, and elytra rufo-maculate; posterior tibiæ fringed with extremely short hairs, as in ♀; rostrum strongly compressed *maculiventris*, sp. n.
- f*⁸. Under surface and prothorax closely punctate; posterior tibiæ fringed with extremely short hairs, as in ♀; prothorax and elytra usually rufo-maculate.
- c*⁷. Body densely pruinose; pygidium cristate *hebetatus*, Gyll.
- d*⁷. Body less densely pruinose; pygidium (♀) feebly bifasciculate at the tip *octonotatus*, sp. n.

1. **Metamasius sericeus.** (Tab. V. figg. 8, 8*a*, ♀, 9, 9*a*, ♂, vars.)

Calandra sericea, Oliv. Ent. v. no. 83, p. 84, t. 28. fig. 409¹; Latr. in Humb. & Bonpl. Obs. Zool. i. p. 206, t. 22. fig. 4².

Sphenophorus sericeus, Gyll. in Schönh. Gen. Curc. iv. p. 896³; Jacq. Duval, in Sagra's Hist. fis., polit. y nat. de Cuba, Ins. p. 96⁴.

Metamasius sericeus, Horn, Proc. Am. Phil. Soc. xiii. p. 410⁵; Lec. op. cit. xv. p. 331⁶.

Var. *Calandra dimidiata*, Sturm, Cat. p. 106 (1826)⁷.

Var. *Rhynchophorus carbonarius*, Chevr. Col. Mex., Cent. i. fasc. 1, no. 20 (June 1833)⁸.

Sphenophorus carbonarius, Schönh. Gen. Curc. iv. p. 897⁹; Boh. op. cit. viii. 2, p. 238¹⁰.

♂. Rostrum angularly thickened near the apex (as seen in profile) and obsoletely sulcate beneath, the long outer portion moderately stout and finely punctate; ventral excavation long and deep; femora and tibiæ strongly fulvo-ciliate, the prosternum with a space in front of the acetabula, the anterior and intermediate coxæ, and a large space at the apex of the fifth ventral segment, also clothed with long, erect, fulvous hairs.

♀. Rostrum neither thickened near the apex nor sulcate beneath, the long outer portion much more slender and almost smooth; ventral excavation shallow, the fifth segment with two small tufts of fulvous hair at the apex, the femora, tibiæ, and prosternum with shorter hairs.

Hab. NORTH AMERICA, California^{5 6} and Arizona⁶.—MEXICO^{3 8 9 10}; BRITISH HONDURAS; GUATEMALA; NICARAGUA; COSTA RICA; PANAMA.—SOUTH AMERICA³ to Peru^{2 3}; ANTILLES, Cuba⁴⁻⁷, Haiti, San Domingo^{1 2 4}.

Abundant throughout the warmer parts of Central America. It is perhaps doubtful whether *M. sericeus* can be retained as distinct from the equally variable *M. hemipterus*, L. (= *ambiguus*, *decoratus*, *sacchari*, and *nigerrimus*, Gyll.*); but as the latter seems to be confined to Tropical South America† (up to as far north as Colombia)

* I have seen the types of these four forms.

† In the British Museum there are two specimens of it, from the Bowring collection, labelled "Mexico," but this locality requires confirmation.

and the Lesser Antilles, it is best to keep the two forms separate. The male-characters are precisely similar in both of them, and both have a black variety; but *M. hemipterus* has the elytral striæ rather coarsely punctate and the elytra themselves usually streaked with red to the apex, a system of coloration not seen in any of our very long series of *M. sericeus*. The following varieties of the present species may be noted:—

- α. Rufous or ferruginous, the prothorax with three black stripes, the outer ones sometimes reduced to small basal spots or altogether wanting, the elytra with the apical half or more black (sometimes including a small red spot on the disc), the under surface and legs spotted or variegate with black [*sericeus*, Oliv.].—Southern United States to Peru.
- β. Sanguineous, a median stripe on the prothorax, the scutellum, elytra, knees, and part of the under surface, black, the elytra sometimes with one or two small red spots at or near the base. (Fig. 8.)—Cesta Rica (Cañas Gordas, &c.), Panama.
- γ. Black, the prothorax with a stripe on each side of the disc (sometimes bifurcate posteriorly), the scutellum, the base of the elytra, and sometimes one or two small spots on the disc beyond the middle, and at most a small spot at the base of the femora, red. (Fig. 9.)—Guatemala (Las Mercedes, Pacific slope); Henduras (Puerto Cortez).
- δ. Black, the elytra sometimes with a red patch at the base [*carbonarius*, Chev.].—Mexico—Nicaragua.

The type of *M. sericeus* was from San Domingo, that of *M. carbonarius* from Cosamaloapam, Mexico.

2. *Metamasius dimidiatipennis*. (Tab. V. figg. 10, 10 a, ♂.)

Sphenophorus dimidiatipennis, Jekel, Ann. Nat. Hist. (3) ii. p. 359 (1858)¹.

- ♂. Rostrum about two-thirds the length of the prothorax, curved, moderately stout, almost smooth, shallowly sulcate and crenate on each side beneath; ventral depression broad and very shallow, the fifth segment with a transverse pilose fovea at the apex; femora and tibiæ finely, densely ciliate, the tibiæ feebly sinuate within, the hairs on the posterior pair long; anterior coxæ with a small fascicle of short fulvous hairs.
- ♀. Rostrum similar to that of the ♂, but neither sulcate nor crenulate beneath; femora and tibiæ with fewer and shorter hairs.

Hab. MEXICO (*Mus. Brit.*), Toxpan in Vera Cruz (*Sallé*); NICARAGUA, Blewfields (*Richmond*, in *U.S. Nat. Mus.*); COSTA RICA (*U.S. Nat. Mus.*), Surubres 250 metres (*Biolley*), Azahar de Cartago (*Underwood*); PANAMA, Chiriqui (*Trötsch*), Canal Zone (*Jennings*, in *U.S. Nat. Mus.*), Taboga I. (*Champion*, *J. J. Walker*).

The type of this species (now in the British Museum) was found by Capt. Kellett during the voyage of H.M.S. 'Herald,' doubtless at Panama, though the locality given¹ is simply "Pacific shore of Central America." It is a larger, longer, and more depressed form than *M. sericeus*. The colour is variable and three forms are represented amongst the seventeen examples seen:—

- α. Black, the prothorax rufous, with three black spots (two basal and one median), the elytra with about the basal third rufous, a transverse black spot below the shoulder excepted. (Fig. 10.)—Nicaragua, Costa Rica, Panama.
- β. Coloured as in α, but with the elytra in great part rufous, a subhumeral spot, a transverse patch at about the middle of the suture, and the sides and suture towards the apex black, the rostrum rufous in one specimen.—E. Mexico.
- γ. Black, the elytra with the base and a spot at some distance below the shoulder rufous.—Costa Rica.

3. *Metamasius quadrilineatus*, sp. n. (Tab. V. figg. 11, 11 a, ♂.)

♂. Subfusiform, depressed, opaque above, shining beneath; black, the prothorax with two broad, posteriorly bifurcate, vittæ on the disc (leaving a complete median stripe, a streak on each side of it on the basal half, and the margins, black), and the elytra with a sharply-defined elongate streak on the fifth interstice below the base, a much shorter streak on the third interstice beyond the middle, and various narrow lines on the rest of their surface (that near the suture extending the entire length), ochreous or ferruginous; the under surface with various spots and streaks along the sides and a subtriangular patch on the middle of the first ventral segment, and the pygidium, femora, and tibiæ in part, ferruginous. Rostrum curved, shorter than the prothorax, rather slender, cylindrical, feebly canaliculate beneath, sparsely, obsoletely punctate, the widened basal portion with a short impressed line, the frontal fovea small. Prothorax slightly longer than broad, rapidly narrowed from about the middle, the sides parallel behind, the base feebly bisinuate; flattened and almost smooth on the disc, sparsely punctured along the outer margin. Scutellum narrow, elongate-triangular, hollowed down the middle. Elytra considerably wider than the prothorax, oblong-subcordate, finely punctate-striate, the interstices somewhat convex. Pygidium sparsely punctate. Beneath sparsely, rather coarsely punctate, the metasternum and ventral segments 1-4 with a very broad almost smooth space down the middle, the fifth segment transversely depressed at the apex. Anterior and intermediate coxæ with a small tuft of hairs. Femora and tibiæ finely ciliate, the posterior tibiæ with very long curled hairs at the middle, these becoming shorter towards the apex.

Length $10\frac{1}{2}$, breadth $3\frac{3}{5}$ - $3\frac{4}{5}$ millim.

Hab. MEXICO, Colonia (*Flohr*); GUATEMALA, Purula in Vera Paz (*Champion*).

Two males, with the markings precisely similar. Separable from all the allied forms by the lineate markings of the elytra, the third and fifth interstices each with a very sharply defined ochreous streak.

4. *Metamasius polygrammus*. (Tab. V. figg. 12, 12 a, ♂.)

Sphenophorus polygrammus, Gyll. in Schönh. Gen. Curc. iv. p. 918¹.

Subfusiform, pruinose, ferruginous, the prothorax with three vittæ on the disc and another on the flanks, the elytra with numerous interrupted lines, and sometimes a triangular patch on the disc before the middle (bordered in front and behind by several reddish spots), and the under surface with various streaks and spots, infusate or black. Rostrum arcuate, nearly as long as the prothorax, moderately stout, compressed, canaliculate beneath, sparsely punctate, subcarinate, the abruptly-widened basal portion more coarsely punctured, that of the ♀ with the apical portion subcylindrical and almost smooth. Prothorax longer than broad, flattened behind and declivous anteriorly, broadly depressed in the middle posteriorly and also hollowed near the hind angles, sinuously swollen laterally at about the middle and obliquely narrowed thence to the apex, strongly bisinuate at the base; sparsely, somewhat coarsely punctate. Scutellum elongate-triangular, narrow. Elytra broad, subcordate, the striæ fine and with rather coarse scattered punctures, the alternate interstices convex and slightly widened. Pygidium sparsely punctate, tumid and setulose along the middle posteriorly. Beneath sparsely, coarsely punctate; ventral excavation of the ♂ long, broad, and rather shallow. Tibiæ curved.

Length 7-12, breadth $2\frac{3}{4}$ - $4\frac{1}{2}$ millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Belt, Janson*); COSTA RICA, Pozo Azul (*Underwood*), San Carlos (*Pittier*; *U.S. Nat. Mus.*); PANAMA, Bugaba (*Champion*), Ancon (*Jennings*, in *U.S. Nat. Mus.*).—ECUADOR; BRAZIL¹, Bahia, Rio Janeiro.

Twelve examples, agreeing with others before me from the above-mentioned localities in Brazil. A very close ally of *M. melancholicus* (Gyll.), but separable

therefrom (when cleaned) by the trifoveate base of the prothorax, and the sinuously swollen margins of the latter. The sculpture is almost always entirely hidden by a greasy incrustation. The colour is variable.

5. **Metamasius biguttatus**, sp. n. (Tab. V. figg. 13, 13 *a*, ♂.)

♂. Elongate, subfusiform, broad, flattened and opaque above, black, the elytra each with a small fulvous spot at the middle of the third interstice. Head rather small, finely punctate, with a deep frontal fovea; rostrum feebly curved, as long as the head and prothorax, comparatively slender, closely punctured, becoming smooth and somewhat tapering towards the tip, obsoletely sulcate and crenulate, and also subangulate near the apex, beneath, the widened basal portion with an impressed line. Prothorax as long as broad, subconical, deeply bisinuate at the base, broadly depressed on the disc posteriorly, very sparsely, finely punctate. Scutellum elongate-subtriangular, flattened. Elytra much wider than the prothorax, oblong-subcordate, finely striate, the striae with scattered punctures, the second and third sinuous at the middle, the interstices broad and almost flat. Pygidium sparsely punctured. Beneath sparsely punctate, the ventral excavation shallow. Legs elongate; anterior femora with a fringe of short, and the anterior tibiae fimbriate with long, hairs; tarsi slender, the third joint very broadly dilated.

Length $11\frac{1}{4}$, breadth $4\frac{1}{2}$ millim.

Hab. GUATEMALA, Cerro Zunil, 4000 feet, Pacific slope (*Champion*).

One example. This species may be known by the long and rather slender rostrum, the conical, basally depressed prothorax, the single small spot at the middle of each elytron, the widely separated anterior coxae, the strongly ciliate anterior tibiae (♂), and the broadly dilated third tarsal joint.

6. **Metamasius bigeminatus**, sp. n. (Tab. V. figg. 14, 14 *a*, ♀.)

Elongate-rhomboidal, rather narrow, opaque above, black, the elytra each with two large, oblong-oval, subcontiguous, fulvous spots on the disc (on the widened portion of the third and fifth interstices) just beyond the middle, the punctures filled with a brownish incrustation. Rostrum feebly curved, slender, cylindrical, nearly half the length of the body, almost smooth, the short, broad, abruptly widened basal portion closely punctate, the frontal fovea deep. Prothorax conical, about as long as broad, bisinuate at the base, sparsely, finely punctate, the disc broadly excavate posteriorly. Scutellum elongate-subtriangular, narrow, flattened. Elytra oblong-subcordate, very finely striate, the striae 2-5 strongly sinuate at the middle, all with widely-scattered rather coarse punctures, the interstices flat. Pygidium sparsely punctured, subcarinate towards the tip. Beneath very sparsely, finely punctate. Anterior coxae widely separated. Legs rather slender.

Length $11\frac{1}{2}$, breadth $4\frac{1}{2}$ millim. (♀.)

Hab. MEXICO, Toxpan in Vera Cruz (*Sallé*).

One specimen. A remarkably distinct form, with two large, oblong, subcontiguous fulvous spots on the disc of each elytron just beyond the middle and the interstices widened to make room for them.

7. **Metamasius sellatus**, sp. n. (Tab. V. figg. 15, 15 *a*, ♂.)

Subelliptic, broad, opaque above, the elytra each with a rather broad, transverse, angulate ochreous or rufous fascia (sometimes enclosing a small black spot on the third interstice) just before the middle, the fascia narrowing outwards and nearly reaching the suture and outer margin. Rostrum curved, nearly as long as the prothorax, moderately stout, gradually widened at the base, obsoletely punctate in the ♂, almost smooth in the ♀, the frontal fovea small. Prothorax about as long as broad, narrowing from near the base, the latter strongly bisinuate; sparsely punctured along the sides, base, and apex, almost smooth

on the disc. Scutellum elongate-triangular, flattened. Elytra broad, subcordate, finely punctate-striate. Pygidium sparsely punctate, subcrystate towards the apex. Beneath shining and very sparsely punctate, the punctures on the flattened portion of the metasternum extremely minute; first ventral segment slightly hollowed down the middle in the ♂, flattened in the ♀. Prosternum convex and unimpressed between the coxæ anteriorly, the latter widely separated. Femora with very short scattered hairs beneath, the tibiæ distinctly ciliate, the posterior pair with longer hairs in the ♂.

Length 12-16, breadth 5-6 $\frac{1}{2}$ millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Belt*); PANAMA, Tabernilla, Canal zone (*Busck*, in *U.S. Nat. Mus.*), Caldera I., Portobello Bay (*Jennings*, in *U.S. Nat. Mus.*).

Five specimens, varying in the development and colour of the elytral fascia. The convex, unimpressed intercoxal portion of the prosternum, the very sparsely punctured metasternum, and the gradually widened basal portion of the rostrum are noteworthy characters in this insect. The last ventral segment is almost bare in both sexes. The Tabernilla example was captured in May 1907, and the two from Caldera Island in April 1908.

8. *Metamasius fasciatus*. (Tab. V. figg. 16, 16 a, ♂.)

Curculio fasciatus, Oliv. Encycl. Méth. v. p. 474 (1790)¹; Fabr. Ent. Syst. i. 2, p. 398².

Calandra fasciata, Oliv. Ent. v. no. 83, p. 83, t. 11. fig. 136 (*Curculio*)³; Fabr. Syst. Eleuth. ii. p. 434⁴.

Sphenophorus fasciatus, Gemm. & Harold, Cat. Col. viii. p. 2648⁵.

Subfusiform, moderately broad, opaque above; black, the elytra each with a transverse, somewhat curved, outwardly widened, sanguineous median fascia extending from the first to the seventh stria. Rostrum stout, arcuate, about two-thirds the length of the prothorax, feebly punctate, smooth at the tip, shallowly sulcate beneath, the frontal fovea small. Prothorax a little longer than broad, narrowing from near the base, slightly depressed and sparsely punctate on the disc behind, the base strongly bisinuate. Scutellum triangular, hollowed anteriorly. Elytra much wider than the prothorax, subcordate, finely punctate-striate, the interstices very minutely punctured down the middle. Pygidium with a short crest at the tip. Beneath somewhat closely punctate laterally. Prosternum hollowed between the coxæ anteriorly. Femora with a few short minute hairs beneath. Tibiæ shortly, finely ciliate within.

♂. Pygidium convex, very coarsely punctate; ventral excavation long, deep, the fifth segment transversely depressed and clothed with a few short hairs at the apex; posterior tibiæ with an oblique tuft of long fulvous hairs at about the middle.

♀. Pygidium flattened, more finely punctate.

Length 16, breadth 5 $\frac{1}{10}$ millim.

Hab. PANAMA, Volcan de Chiriqui (*Trötsch*).—? SOUTH AMERICA.

Two specimens agreeing perfectly with Olivier's coloured profile-figure of *Calandra fasciata*. This species may be known by its subfusiform shape and the narrow, incomplete, sanguineous median fascia of the elytra. It is more elongate than the somewhat similarly marked *M. sellatus* (which has a more slender rostrum, the prosternum convex between the coxæ, and the anterior coxæ themselves a little more widely separated), the metasternum smoother at the sides, and the elytral fascia less developed and placed (as in *M. ochreofasciatus*) at a greater distance from the base. This insect has been quoted as from N. America^{2 3 5}, without any more definite locality.

9. **Metamasius scutiger**, sp. n. (Tab. V. figg. 17, 17 *a*, ♂.)

Subfusiform, opaque above, black, the elytra with a very large, common, anteriorly-dilated, scutiform, fulvous patch extending from the base to near the tip (leaving the shoulders, apex, and sides posteriorly, black), the fifth interstice with a small black spot before the middle, the prothorax with two faint reddish spots at the base. Head closely punctate, the frontal fovea oblong; rostrum about as long as the prothorax, feebly curved, the broad, abruptly-widened basal portion coarsely punctate, the apical portion rather slender and very sparsely punctured, smooth at the tip. Prothorax as long as broad, subconical, abruptly constricted in front, the hind angles rounded, the base bisinuate; sparsely punctate, the disc flattened posteriorly. Scutellum narrow, elongate-triangular. Elytra subcordate, finely striate, the striae with scattered coarse punctures, the alternate interstices a little wider than the others. Pygidium rather narrow, rugosely punctate. Beneath very sparsely punctate; first ventral segment faintly sulcate along the middle. Tibiae curved externally, fringed with extremely short hairs.

Length $6\frac{1}{4}$, breadth $2\frac{1}{2}$ millim. (♂.)

Hab. PANAMA, Bugaba (*Champion*).

One specimen, assumed to be a male. A small form, with peculiar elytral markings, and not very closely allied to any of the other species here enumerated. It has the anterior and middle coxae widely separated. The prothorax in certain lights appears to have a denser velvety-black spot on the middle of the disc.

10. **Metamasius sulcirostris**, sp. n.

♂. Oblong-elliptic, opaque above, pruinose, black, the lower part of the flanks of the prothorax (and in one specimen two very faint parallel vittae on the disc also) rufescent. Rostrum very stout, arcuate, shorter than the prothorax, broadly, sharply sulcate beneath (the sulcus with an acute median ridge), finely punctate, the widened basal portion sulcate and rugosely punctured. Prothorax as long as broad, rounded at the sides anteriorly, deeply bisinuate at the base, somewhat closely punctate laterally and on the flattened portion of the disc, the rest of the surface with minute scattered punctures. Scutellum oblong-triangular, hollowed down the middle. Elytra a little wider than the prothorax, subcordate, finely punctate-striate, the interstices flat. Pygidium sparsely punctate, pilose. Beneath sparsely, rather coarsely punctate; ventral excavation deep, the fifth segment with a few hairs towards the apex. Anterior and intermediate coxae with a small tuft of hairs. Femora and tibiae finely ciliate, the tibiae somewhat curved.

Length $12\frac{1}{2}$ –13, breadth 5 millim.

Hab. GUATEMALA, near the city (*Salvin*); NICARAGUA, Chontales (*Belt*).

Two males, agreeing precisely in their general structure. This species bears a close resemblance to *Cactophagus validirostris* (Gyll.), but may be separated from it by the narrow, non-sulcate peduncle of the submentum, the less approximate anterior coxae, the deeply, inferiorly sulcate rostrum (♂), the very sparsely and less coarsely punctured prothorax, the base of which is strongly bisinuate, the longer hairs on the pygidium, &c. It is possible that more distinctly rufo-maculate forms may occur.

11. **Metamasius cincinnatus**, sp. n. (Tab. V. figg. 18, 18 *a*, *b*, ♂.)

♂. Elongate, fusiform, somewhat convex, opaque above, shining beneath; black, the prothorax and elytra rufous, the former with a broad posteriorly bifurcate median vitta and a transverse patch on each side at the base, and the latter with a transverse spot on each side below the shoulder, a common angulate median fascia (widened inwards), and an oblong patch on the suture at the apex, black. Rostrum stout, curved, much shorter than the prothorax, almost smooth; sulcate, laterally crenate, and also angulate at the tip, beneath; the frontal fovea small. Prothorax longer than broad, flattened on the

disc, almost impunctate, the base feebly bisinuate. Scutellum elongate-triangular, hollowed in front. Elytra wider than the prothorax, oblong-subcordate, finely punctate-striate, the interstices each with an irregular row of excessively minute punctures. Pygidium rather convex, coarsely punctured. Beneath very sparsely and finely, the abdomen somewhat coarsely, punctate; ventral excavation long and shallow. Anterior and intermediate coxæ with a small tuft of short hairs. Femora sparsely pilose beneath, the anterior pair almost baro. Posterior tibiæ (fig. 18 *b*) with a matted tuft of very long curled fulvous hairs at about the middle and a few finer and shorter hairs between it and the apex.

Length $13\frac{1}{2}$, breadth $4\frac{2}{3}$ millim.

Hab. NICARAGUA, Chontales (*Janson*).

One male, somewhat discoloured. Narrower and more convex than *M. dimidiatipennis*, the prothorax relatively longer, the posterior tibiæ with a matted tuft of very long curled hairs in the male, the fifth ventral segment not foveate in this sex, the markings of the upper surface different.

12. *Metamasius connexus*, sp. n. (Tab. V. figg. 19, 19 *a*, ♂.)

Oblong-oval, rather broad, opaque above; black, the prothorax with a triangular or v-shaped mark at the base and an oblique stripe on each side of the disc (sometimes connected), and the elytra with a transverse, common, x-shaped mark at the base, a curved or transverse streak on the disc at a little beyond the middle (these markings coalescent laterally in one specimen), and sometimes an oblong spot towards the apex, rufous or fulvous, the mesothoracic side-pieces sometimes rufescent. Rostrum (♂) curved, stout, compressed, shorter than the prothorax, very sparsely, finely punctate above, sulcate, laterally crenulate, and angulate near the tip beneath, (♀) almost smooth above and beneath, and slightly longer, the frontal fovea small. Prothorax as long as broad, parallel at the sides behind, finely punctured laterally and at the apex, flattened and almost smooth on the disc. Scutellum elongate-triangular. Elytra much wider than the prothorax, oblong-subcordate, finely punctate-striate. Pygidium coarsely punctate, suberistate at the apex. Beneath very sparsely punctured. Prosternum flattened between the coxæ in the ♂, convex in the ♀. Femora with a few minute hairs beneath. Tibiæ with a fringe of short hairs.

♂. Ventral excavation long and deep, the fifth segment with a transverse sparsely pilose fovea at the tip; posterior tibiæ with a fringe of long hairs.

Length $10\frac{3}{4}$ – $14\frac{1}{3}$, breadth 4– $5\frac{1}{10}$ millim. (♂ ♀.)

Hab. MEXICO, Toxpam in Vera Cruz (*Sallé*: ♀); GUATEMALA, San Isidro and Mirandilla, Pacific slope (*Champion*: ♂ ♀).

Three specimens, varying in the extent of the rufous or fulvous markings, though the general pattern is similar. Very like *M. signiventris* (Kirsch), but with a differently formed rostrum, and the posterior tibiæ strongly ciliate, in the male; the transverse oblique fascia below the base of the elytra uninterrupted, the prothorax relatively wider, the prosternum convex between the coxæ in the female, the metasternum immaculate.

13. *Metamasius dasyurus*, sp. n. (Tab. V. figg. 20, 20 *a*, ♂.)

Elongate, subfusiform, rather narrow, somewhat depressed, pruinose, opaque above; ferruginous, variegated with black, the markings on the prothorax consisting of a lanciform median vitta, a triangular or elongate-triangular patch on each side of it at the base, and an elongate patch on the flanks, those on the elytra

consisting mainly of two broad, irregular, oblique fasciæ, which are connected with a narrow sutural stripe. Head closely punctate; rostrum (σ) strongly arcuate, stout, compressed, much shorter than the prothorax, abruptly widened, canaliculate, and closely punctured at the base, the long apical portion sparsely, finely punctate above, sulcate and crenate on each side beneath, (φ) with the apical portion much more slender, almost smooth, above and beneath, the frontal fovea rather deep. Prothorax a little longer than broad, narrowing from about the middle (in one σ from Ecuador rounded at the sides and as broad as the elytra), tubulate in front, feebly bisinuate at the base, somewhat closely punctate, flattened or depressed on the disc posteriorly. Scutellum elongate-triangular, flattened. Elytra oblong-subcordate, usually wider than the prothorax, finely punctate-striate, the interstices minutely punctate down the middle. Pygidium thickly punctate, somewhat convex in the σ , densely fulvo-pilose at the tip in both sexes. Beneath sparsely punctate. Anterior and intermediate coxæ with a cluster of fulvous hairs.

Var. α . Coloured as in the type, but with the oblique black fascia below the base of the elytra divided into two spots and the second fascia transverse.

Var. β . Black, the prothorax with a V-shaped mark at the base and an oblique evanescent stripe on each side, and the elytra with a small spot on the shoulder, another on the disc below the base, and a curved, angulate, or oblique patch at about the middle, rufous.

Var. γ . Black, each elytron with a transverse or oblique spot below the base and an oblique mark at about the middle (sometimes almost obsolete) rufous, the prothorax sometimes faintly rufo-maculate.

σ . Ventral excavation very broad, coarsely, closely punctate, and extending forwards along the whole length of the metasternum, the fifth segment pilose; anterior and intermediate femora densely, and the posterior pair very sparsely, fulvo-pilose beneath; anterior tibiæ with a dense fringe of long fulvous hairs.

φ . First ventral segment unimpressed; femora almost bare, the anterior tibiæ fringed with very short hairs. Length $9\frac{3}{4}$ –14, breadth 3–5 millim. (σ φ .)

Hab. COSTA RICA (*Van Patten*), San Carlos (*U.S. Nat. Mus.*), Azahar de Cartago (*Underwood*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).—ECUADOR, Paramba (*Rosenberg, in Mus. Brit.*).

Numerous examples, the extreme forms occurring in the same localities in both Costa Rica and Panama. The sexual characters are extremely well marked, the male being easily recognizable by the stout, inferiorly sulcate, crenate rostrum, the densely ciliate anterior tibiæ, &c. The tuft of hair at the apex of the pygidium is present in both sexes. *M. dasyurus* is more elongate than *M. rimoratus* (Gyll.) (the φ only of which has been described), and has a more closely punctured prothorax. *M. obsoletus* (Gyll.) (the type of which, a σ , I have also seen) has the intermediate and posterior tibiæ of the male subangularly dilated at about the middle, the prothorax smoother, &c.

14. *Metamasius submaculatus*, sp. n. (Tab. V. figg. 21, 21 α , σ .)

Sphenophorus submaculatus, Chevr. in *Mus. Brit.*

Elongate, subfusiform, narrow, flattened above, somewhat shining; black, the prothorax ferruginous, with a lanciform median vitta on the anterior half and an elongate streak on either side of it at the base black, the elytra ferruginous, with a triangular or oblique patch near the suture before the middle and an interrupted submarginal stripe black, the rostrum and legs also in part ferruginous. Head sparsely punctate, transversely grooved between the eyes; rostrum strongly arcuate, a little shorter than the prothorax, moderately stout, compressed, abruptly widened near the base, closely punctate throughout, in the σ angulate near the tip, shallowly sulcate, and irregularly serrate beneath, in the φ sub-cylindrical, a little more slender, and not serrate beneath. Prothorax much longer than broad, more or less rounded at the sides, abruptly tubulate in front, subtruncate at the base; densely, rather coarsely, punctate, the disc with a shallow oblong depression behind. Scutellum narrow, elongate-triangular,

sometimes foveate or hollowed down the middle. Elytra a little wider than the prothorax, crenate-striate, the interstices flat, closely, coarsely, irregularly uniseriate-punctate. Pygidium flattened, closely punctured. Beneath densely punctate; first ventral segment very broadly depressed down the middle in the ♂. Tibiæ with a dense line of extremely short fulvous hairs within.

Var. Black, the markings almost or completely obsolete.

Length $8\frac{1}{2}$ – $10\frac{1}{2}$, breadth 3 – $3\frac{2}{5}$ millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Belt*); COSTA RICA, San José (*Biolley*).—COLOMBIA (*Goudot, in Mus. Brit.*).

Eight males and three females, six of them with the markings precisely similar. The rather coarse, dense puncturing of the upper and under surfaces, the inferiorly serrate and apically angulate rostrum of the male, the almost straight base of the prothorax, and the widely separated anterior coxæ readily distinguish the present species, apart from its narrow shape and the peculiar markings of the elytra when present. *M. hebetatus* is a somewhat nearly allied form.

15. *Metamasius callizona*. (Tab. V. figg. 22, 22 a, ♂.)

Sphenophorus callizona, Chevr. Ann. Soc. Ent. Fr. 1882, p. 578¹.

Phyllerythrus callizona, Chevr. op. cit. 1885, pp. 92, 93².

Oblong-elliptic, opaque above, black, the elytra with a transverse fulvous fascia (of variable width, not reaching the suture or outer margin, and narrowing outwards) below the base. Rostrum stout, arcuate, nearly as long as the prothorax, very sparsely, finely punctate, smooth at the tip, feebly canaliculate between the points of insertion of the antennæ, shallowly sulcate beneath in the ♂, that of the ♀ a little smoother and not so stout, the frontal fovea deep. Prothorax as long as broad, gradually and arcuately narrowing from about the middle, bisinuate at the base; closely, finely punctate along the sides, apex, and basal margin, almost smooth on the disc. Scutellum elongate-triangular, hollowed down the middle anteriorly. Elytra much wider than the prothorax, oblong-aubeordate, somewhat coarsely and deeply punctate-striate, the interstices feebly convex. Pygidium sparsely, coarsely punctate. Beneath closely and rather coarsely punctate, much smoother down the middle, the ventral excavation of the ♂ very deep and extending forwards along the apical half of the metasternum. Tibiæ closely ciliate, the hairs moderately long on the posterior pair in the ♂, short in the ♀.

Length 13–16, breadth $5\frac{2}{3}$ – $6\frac{1}{2}$ millim. (♂ ♀.)

Hab. MEXICO^{1 2}, Toxpan in Vera Cruz (*Sallé*); GUATEMALA, San Juan in Alta Vera Paz (*Champion*).

This species resembles *Eucactophagus orizabensis* in colour, but it is narrower and more oblong, the metasternum is not protuberant, &c. The insect is scarcely recognizable from the inaccurate diagnosis*. I have seen four specimens of *M. callizona*, including the type, a male.

16. *Metamasius ochreofasciatus*, sp. n. (Tab. V. figg. 23, 23 a, ♀.)

Elongate-oval, robust, opaque above, black, the elytra each with a narrow, undulate, transverse, ochreous fascia just beyond the middle (not reaching the suture or outer margin). Rostrum stout, cylindrical, curved, about two-thirds the length of the prothorax, obsolete punctate, the frontal fovea rather deep.

* The rostrum is said to be "basi crasso, profunde scisso," which must have been an error of observation.

Prothorax a little longer than broad, bisinuate at the base, narrowing from the middle, punctured along the sides, base, and apex, almost smooth on the disc. Scutellum elongate-triangular, hollowed anteriorly. Elytra wider than the prothorax, somewhat rapidly narrowing from the rounded humeri, depressed at the sides below them and also on the disc towards the apex; rather coarsely punctate-striate, the interstices minutely punctured down the middle. Pygidium flattened, sparsely, coarsely punctate, fulvo-cristate along the apical half. Beneath somewhat closely punctured, the flattened portion of the metasternum and first ventral segment almost smooth. Femora with a few very short hairs beneath.

Tibiae finely ciliate within.

Length 21, breadth $7\frac{1}{2}$ millim. (♀.)

Hab. COSTA RICA, Azahar de Cartago (*Underwood*).

One specimen. A large, elongate form, with a narrow, incomplete, ochreous fascia just beyond the middle of each elytron (formed by small confluent spots), the prothorax comparatively long and almost smooth on the disc, the tibiae finely ciliate. This species resembles *M. fasciatus*, but it is longer and more robust, the scutellum is much longer, the elytra are less widened anteriorly and more coarsely punctate-striate, the rostrum and legs are stouter, &c.

17. *Metamasius nudiventris*, sp. n. (Tab. V. figg. 24, 24 a, ♀.)

Elongate-oval, rather convex, opaque above; black, the elytra each with a curved, oblique, transverse fascia at about one-third from the base and an irregular, transverse, subtriangular or T-shaped mark on the disc beyond the middle (neither reaching the suture), a minute spot on the shoulder beneath, and sometimes one or two others along the basal margin, rufous. Rostrum nearly as long as the prothorax, moderately stout, curved, subcylindrical, shining, sparsely punctate in the ♂, almost smooth in the ♀, the widened basal portion faintly canaliculate, the frontal fovea small. Prothorax about as long as broad, parallel at the sides posteriorly, feebly bisinuate at the base, very sparsely, finely punctate, flattened on the disc behind. Scutellum elongate-triangular. Elytra oblong-subcordate, much wider than the prothorax, finely punctate-striate. Pygidium coarsely punctured. Beneath very sparsely punctate. Femora with a few very short hairs beneath. Tibiae finely ciliate.

♂. Ventral excavation long and shallow, the fifth segment with a few short scattered hairs at the tip, as in the ♀; posterior tibiae fringed with moderately long hairs.

Length $10\frac{1}{2}$ –13, breadth $3\frac{9}{10}$ –5 millim. (♂ ♀.)

Hab. NICARAGUA (*Sallé*), Chontales (*Belt*).

Two males and five females. Extremely like the dark form of *M. ensirostris* (Germ.) (= *dispar*, Gyll.), but easily separable therefrom by the absence of the dense cluster of long hairs on the last ventral segment in the male, and by the non-pilose prosternum, &c., in this sex; the female, too, is without the two tufts of hair at the tip of the abdomen. *M. bisbisignatus* (Gyll.) has a longer and flatter prothorax, with an elongate punctured area on the disc at the base, and the male-characters as in *M. ensirostris*. In the present species the tibiae are finely ciliate in both sexes.

18. *Metamasius scutatus*, sp. n. (Tab. V. figg. 25, 25 a, ♂.)

Oblong-elliptic, rather broad, opaque above, shining beneath; black, the prothorax with two broad, posteriorly bifurcate, ferruginous vittae on the disc (leaving a lanciform median stripe, a curved streak on each side of it on the basal half, and the margins, black); the elytra ferruginous, each with five black spots arranged in two oblique rows across the disc (one below the shoulder, transverse, one near the

middle of the suture, oblong-semicircular, one at the sides beyond the middle, large and triangular, and a small one on the third and fifth interstices towards the apex), the angulate space between them ochreous; the under surface (including a large transverse space near the base of the abdomen), femora, and tibiae maculated with ferruginous. Rostrum curved, a little shorter than the prothorax, moderately stout, sparsely, very finely punctate, obsolete canaliculate beneath, the widened basal portion with an impressed line, the frontal fovea small. Prothorax as long as broad, obliquely narrowing from about the middle, feebly bisinuate at the base, flattened on the disc behind, very sparsely punctate. Scutellum elongate-triangular, narrow, almost flat. Elytra much wider than the prothorax, somewhat coarsely punctate-striate, the interstices feebly convex. Pygidium rather convex, coarsely punctate. Beneath sparsely, rather coarsely punctate, much smoother down the middle, the first ventral segment with a shallow median excavation. Femora (the anterior pair excepted) and tibiae finely ciliate, the posterior tibiae with longer hairs.

Length $10\frac{1}{2}$, breadth 4 millim.

Hab. COSTA RICA, Boca de Limon (*Pittier, in Mus. Brit.*).

One specimen, found in March 1897. Broader and less depressed than *M. quadrilineatus*, the markings of the elytra very different. The ferruginous colour of a portion of the elytral surface does not seem to be due to discoloration, and the ochreous space on the disc forms a large, common, shield-shaped patch enclosing two black spots.

19. *Metamasius maculiventris*, sp. n. (Tab. V. figg. 26, 26 a, ♀.)

Elongate-oval, rather convex, opaque above; black, the prothorax with an oblique stripe on each side, and sometimes a V-shaped mark at the base, the elytra with a small spot at the base of the fifth interstice and another at the shoulders beneath (sometimes connected), a transverse patch on the disc before the middle and a larger one beyond it (sometimes connected externally and sometimes reduced to small spots or streaks), and the metasternum with a large spot on each side, sanguineous or ferruginous. Rostrum stout, strongly compressed, greatly curved, shorter than the prothorax, very sparsely, finely punctate, more or less angulate at the apex beneath in the ♂, the abruptly-widened basal portion canaliculate and somewhat coarsely punctured, the frontal fovea deep. Prothorax about as long as broad, compressed at the sides behind the middle and areately narrowed anteriorly, feebly bisinuate at the base, sparsely, finely punctate, flattened on the disc behind. Scutellum elongate-triangular. Elytra oblong-subcordate, much wider than the prothorax, finely punctate-striate, the interstices minutely punctate down the middle. Pygidium sparsely punctate, flattened, subearinate in the ♂, sparsely pilose at the tip. Beneath sparsely punctate. Anterior coxae with a small tuft of very short fulvous hairs. Femora and tibiae feebly ciliate in both sexes, the hairs short.

♂. Ventral excavation shallow, extending forwards for nearly the whole length of the metasternum.

Length 12-16, breadth $4\frac{1}{2}$ -6 millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Bélt, Janson: ♂ ♀*); COSTA RICA, Tuis (*Pittier: ♀*).

Five specimens, varying in the extent of the rufous markings of the upper surface. Nearly related to *M. signiventris* (Kirsch), from Ecuador (the type, ♂, of which I have seen*), but with a much stouter, compressed rostrum, which is angulate at the apex beneath in the male, the fifth ventral segment without a very large densely fulvo-pilose space in this sex, the prothorax relatively broader, &c. The laterally rufo-vittate prothorax, the stout, compressed rostrum, the spotted metasternum, &c., separate *M. maculiventris* from *M. nudiventris* and *M. rimoratus*.

* There is a ♀ of it from Macas, Ecuador, in the Fry collection at the British Museum.

20. *Metamasius hebetatus*. (Tab. V. figg. 27, 27 a, ♂.)

Sphenophorus hebetatus, Gyll. in Schönh. Gen. Curc. iv. p. 919¹; Boh. op. cit. viii. 2, p. 243¹.

Elongate-oval, densely olivaceo- or brownish-grey-pruinose (when fresh), black, the prothorax sometimes ferruginous, except down the middle and along the sides, or with an oblique rufous stripe on each side anteriorly; the elytra ferruginous, with a common large transverse patch before the middle, a patch below the shoulder, and rather more than the apical third black, the ferruginous portion sometimes reduced to a large laterally-dilated C-shaped patch on the disc of each elytron or altogether wanting; the legs and under surface sometimes rufo-maculate. Rostrum arcuate, fully as long as the prothorax, rather slender, compressed, closely punctured at the base, obsoletely punctate in its outer half, the abruptly-widened basal portion striato-punctate and canaliculate; that of the ♀ with the long apical portion more slender, subcylindrical, and almost smooth. Prothorax flattened on the disc, sparsely, rather coarsely punctate, feebly bisinuate at the base. Scutellum elongate-triangular, flat. Elytra finely punctate-striate, the interstices somewhat convex, uniseriate-punctate. Pygidium cristate. Beneath coarsely punctate; metasternum and first two ventral segments broadly excavate down the middle in the ♂, flattened in the ♀. Anterior and intermediate coxæ each with a small tuft of fulvous hairs. Femora finely pubescent beneath. Tibiæ with a dense fringe of very short hairs within. Third tarsal joint comparatively small, about twice as wide as the apex of the second.

Length $9\frac{1}{2}$ – $11\frac{1}{4}$, breadth $3\frac{2}{5}$ – $4\frac{1}{10}$ millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Richardson*); COSTA RICA (*Pittier*, in *Mus. Brit.*), Talamanca, 200 metres (*Biolley*), San Carlos (*U.S. Nat. Mus.*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).—COLOMBIA (*coll. Fry*), Antioquia¹; VENEZUELA; ECUADOR, Paramba (*Rosenberg*), Nanegal (*Dolby-Tyler*).

Numerous examples, agreeing with the type (♀) communicated by Dr. Sjöstedt. The markings of the elytra in this insect are almost hidden by the dense brownish-grey pruinosity, and a fresh description is therefore given from the long series before me, some of the specimens from Ecuador showing the general pattern much better than the type from Antioquia. *M. hebetatus* is not unlike the eastern "*Sphenophorus*" *leprosus*, Fähr., but the latter has a stout, inferiorly serrate rostrum in the male, a much narrower scutellum, the elytra differently sculptured, the anterior coxæ more approximate, &c.

21. *Metamasius octonotatus*, sp. n. (Tab. V. figg. 28, 28 a, ♀.)

Elongate, subfusiform, rather narrow, flattened, alutaceous, and opaque above; ferruginous, the prothorax with an incomplete median vitta, a small oblong streak near the outer margin towards the base, and a stripe on the flanks, black; the elytra each with an oblique subtriangular spot near the suture before the middle and an interrupted submarginal stripe (formed by three oblong streaks, the subapical one indistinct) black; the scutellum, knees, and under surface black, the sides of the meso- and metasternum and of the abdomen rufo-maculate. Rostrum moderately stout, strongly arcuate, a little shorter than the prothorax, the widened basal portion closely punctate, the apical portion somewhat compressed and almost smooth. Prothorax a little longer than broad, obliquely narrowed anteriorly, the sides parallel behind, the base subtruncate; rather closely, irregularly punctate (the punctures here and there much coarser and clustered into denser patches), the disc depressed in the middle near the base. Scutellum elongate-triangular, slightly hollowed down the centre. Elytra oblong-subcordate, finely punctate-striate, the interstices almost impunctate. Pygidium finely punctured, with two small tufts of fulvous hair at the tip. Beneath shallowly punctate, the interspaces alutaceous.

Length 10– $10\frac{1}{5}$, breadth $3\frac{2}{5}$ – $3\frac{1}{2}$ millim. (♀.)

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

Two females. Very like *M. submaculatus*, and similarly coloured, but with the prothorax not so coarsely and more unequally punctured, the elytral interstices almost impunctate, the rostrum (♀) strongly arcuate, the upper surface opaque. The widely separated intermediate coxæ distinguish *M. octonotatus* from *Rhodobænus*.

HOMALOSTYLUS.

Homalostylus, Chevrolat, Ann. Soc. Ent. Fr. 1885, p. 287.

The type of this genus is *Sphenophorus latiscapus*, Kirsch, from Colombia. Four species are now added from within our limits, one of them, *H. dentirostris*, having the antennæ formed as in *Homalostylus* in the male, and as in *Rhodobænus* in the female. Nevertheless, it is convenient to retain Chevrolat's genus as distinct for the present. The essential characters are:—Antennal scape more or less dilated throughout the greater part of its length, at least in the male; peduncle of the submentum narrow, flattened or compressed; anterior coxæ subcontiguous; metasternum somewhat tumid and extending conically forwards between the narrowly separated middle coxæ; third tarsal joint broad, spongy-pubescent beneath.

1. *Homalostylus nigrofasciatus*, sp. n. (Tab. V. figg. 29, 29 a, ♂; 30, ♀.)

Elongate, subfusiform, opaque above; black, pruinose, the fine scattered punctures each surrounded by a larger conspicuous cinereous spot, the spots arranged in a single series along each elytral interstice, the elytra also with two more or less distinct, transverse, velvety-black fasciæ—one about the middle and the other towards the apex. Rostrum stout, about as long as the prothorax, strongly and abruptly arcuate from the rather short, broadly widened, rugose basal portion; the apical portion compressed, closely punctate and carinate at the base above, becoming gradually smoother towards the tip, and shallowly sulcate, laterally crenate, and angulate near the apex beneath, in the ♀ smooth and angulate nearer the tip; the frontal fovea small. Antennal scape broadly dilated, rounded within, sinuate without, distinctly wider than the club in the ♂, a little narrower in the ♀. Prothorax slightly longer than broad, obliquely narrowing from about the middle, feebly bisinuate at the base, transversely excavate on the disc posteriorly, very sparsely, finely punctate. Scutellum long, narrow. Elytra a little wider than the prothorax, oblong, very finely punctate-striate, the interstices flat, each with a scattered series of minute punctures. Pygidium long, subconical, rather convex, sparsely punctate, setulose at the tip. Beneath very sparsely, finely punctate; ventral excavation of the ♂ extending forwards on to the metasternum, the first segment with a short cariniform prominence in the middle towards the base in this sex. Femora with scattered short hairs beneath. Tibiæ closely fringed with short hairs, the posterior pair broadly dilated, rounded externally and feebly sinuate within.

Length 10–12½, breadth 2½–4 millim. (♂ ♀.)

Hab. COSTA RICA, Rio Sucio (*Rogers*: ♂), Guaitil de Pirris, Pacific slope, 800 metres (*Biolley*: ♂); PANAMA, Volcan de Chiriqui (*Champion*: ♀).

The description is taken from three males and one female. More elongate than the Colombian *H. latiscapus* (Kirsch) (the type, ♀, of which I have seen), and very differently coloured; the posterior tibiæ broadly dilated; the antennal scape wider; the rostrum of the male strongly crenate and angulate near the tip beneath, the first ventral segment with a short cariniform prominence in this sex, as in *Rhodobænus maculifer*.

2. *Homalostylus dentirostris*, sp. n. (Tab. V. figg. 31, 31 *a*, ♂ ; 32, ♀.)

- ♂. Elongate, subfusiform, opaque above, pruinose, black, the rostrum and legs obscure ferrugineous, the prothorax with two indistinct reddish vittæ on the disc and another on each flank, and the elytra with a faint, strongly sinuate, lighter stripe on the disc (extending to about the apical third of the suture, and partly surrounding a common, large, heart-shaped, black patch which extends up the suture to the base). Rostrum about as long as the prothorax, stout, abruptly bowed from the rather elongate, broad, coarsely punctate, basal portion, which is acutely, triangularly dilated on each side beneath, the apical portion strongly compressed and sparsely punctate to near the tip. Antennal scape about twice as long as the funiculus, a little narrower than the club, rounded within. Prothorax much longer than broad, nearly as long as the elytra, parallel-sided in its basal half, obliquely narrowed anteriorly, broadly depressed on the disc towards the base, the latter feebly bisinuate; sparsely, finely punctate. Scutellum long, narrow. Elytra a little wider than the prothorax, finely punctate-striate, the interstices obsoletely uniseriate-punctate. Pygidium conical, coarsely punctate, setulose at the tip. Beneath sparsely punctate. First ventral segment flattened down the middle and with a short, compressed, cariniform prominence towards the base. Femora ciliate beneath. Tibiæ curved, the intermediate and posterior pairs dilated and sinuous within.
- ♀. Rostrum with the basal portion shorter, unarmed at the sides, the apical portion almost smooth, subangulate near the tip beneath; antennal scape much narrower, gradually widened outwards; prothorax a little less elongate; the tibiæ subequal in width; the sinuous reddish stripe on the elytra more distinct.

Length $10\frac{1}{2}$ – $11\frac{1}{10}$, breadth $3\frac{1}{4}$ millim.

Hab. MEXICO, Santecomapan in Vera Cruz (*Sallé*).

Two specimens, both in bad condition, the male a typical *Homalostylus*, the female with the antennæ formed very much as in *Rhodobænus*. The male has the rostrum acutely, triangularly dilated on each side near the base beneath, the prothorax unusually elongate, and the first ventral segment plicate in the middle; the antennal scape is much narrower than in *H. nigrofasciatus*.

3. *Homalostylus incertus*, sp. n. (Tab. V. figg. 33, 33 *a*, ♂.)

- Elongate, subfusiform, robust, opaque above, black, plumbeo-pruinose, the punctures each surrounded by a larger or smaller greyish-brown dot, the elytra with two common, transverse, velvety-black fasciæ—one just before the middle, the other (less distinct) towards the apex. Rostrum stout, compressed, a little shorter than the prothorax, curved, bowed at the tip, the moderately widened basal portion coarsely punctured and narrowly sulcate towards the frontal fovea, the apical portion sparsely punctate and without prominence at the apex beneath; antennal scape moderately long, about as wide as the anterior tibia in its outer half. Prothorax as long as broad, narrowed and subtubulate in front, feebly bisinuate at the base, unimpressed on the disc, somewhat closely punctate. Scutellum oblong-triangular, small. Elytra long, a little wider than the prothorax, gradually narrowed from the rounded humeri, finely punctate-striate, the interstices flat, each with an irregular row of punctures, which are all surrounded by a larger or smaller greyish dot. Pygidium long, subconical, setulose at the tip. Beneath sparsely, rather coarsely punctate; ventral excavation broad, reaching forwards to near the narrow, conical, intercoxal process of the metasternum. Femora fringed with moderately long, and the tibiæ with short, hairs.
- Length $12\frac{1}{2}$, breadth 4 millim. (♂.)

Hab. MEXICO, Toxpan in Vera Cruz (*Sallé*).

One male. A narrow, elongate, robust form, resembling *Rhodobænus auriculatus*, *R. fortirostris*, and others with nigro-bifasciate elytra, but easily distinguishable therefrom by the slightly dilated scape of the antenna.

4. *Homalostylus subcylindricus*, sp. n. (Tab. V. figg. 34, 34 a, ♂.)

Elongate, rather narrow, somewhat cylindrical, opaque, black more or less variegated with fusco-ferruginous (the ♂ ferruginous above, with the prothorax black at the sides and down the middle, and the elytra each with four black patches—three, oblique, along the sides, and one, subtriangular, on the disc near the suture, at about the middle); pruinose, the scattered punctures each surrounded by a rather large, rounded, brownish-cinereous spot, the spots along the suture of the elytra distant one from another. Rostrum feebly curved, stout, somewhat compressed, very little widened basally, coarsely, rather closely punctate to near the tip, in the ♂ much shorter than the prothorax, in the ♀ considerably longer and with the apex smoother. Eyes narrow. Antennal scape about as broad as the anterior tibia in both sexes, subequal in width throughout. Prothorax about as long as broad, gradually narrowed anteriorly, feebly bisinuate at the base, sparsely punctate. Scutellum small, depressed, triangular. Elytra oblong, very little wider than the prothorax, finely punctate-striate, the interstices each with a row of scattered punctures. Pygidium conical, sparsely punctate. Ventral excavation of the ♂ deep, extending from the front of the first segment to far beyond the middle of the metasternum. Prosternum considerably developed at the base. Femora with a row of scattered hairs beneath.

Length 10–12, breadth 3–3½ millim. (♂ ♀.)

Hab. GUATEMALA, Dueñas (*Champion*: ♂), Trece Aguas in Alta Vera Paz (*U.S. Nat. Mus.*: ♀).

Two specimens, evidently sexes of the same species, which is distinguishable by the moderately dilated antennal scape in both sexes, the feebly dilated basal portion of the rostrum, and the subcylindrical form of the body. *H. subcylindricus* superficially resembles *Rhodobænus varieguttatus* and its allies.

RHODOBÆNUS.

Rhodobænus, Leconte, Proc. Am. Phil. Soc. xv. p. 332 (1876); Chevrolat, Ann. Soc. Ent. Fr. 1885, p. 275.

This genus, based upon *Curculio* 13-punctatus, Ill., and *Sphenophorus pustulosus*, Gyll., both common N.-American insects, has its headquarters within our limits, whence about fifty species are now recorded. Its chief characters are:—The narrow peduncle of the submentum, usually with a tooth or compressed prominence in front, or at the base, at least in the ♀; the gradually widened antennal scape; the subcontiguous anterior coxæ; the narrowly separated intermediate coxæ; the subconical antero-intercoxal process of the metasternum; the unarmed outer apical angle of the tibiæ; the broad, spongy-pubescent third tarsal joint; and the more or less velvety, pruinose, or spotted upper surface of the body. The femora and tibiæ are similarly ciliate in the two sexes; but the males may generally be known by the hollowed first ventral segment (the depression sometimes with a compressed tubercle or short ridge in the middle or towards the anterior margin, or broadly extending forwards along the metasternum), and the females by the angular or dentiform prominence on the peduncle of the submentum (this being usually less conspicuous or wanting in the male, except in *R. mesomelas* and a few other species) and the smoother (and often longer) apical portion

of the rostrum. In the male of *R. auriculatus* the prothorax has a rectangular or ear-like prominence on each side in front, and in the female of *R. subcristatus* the median portion of the rostrum is closely setulose above. In *R. dentifer* and *R. adpersus* the prosternum has two flattened, subcontiguous, tuberculiform prominences in the middle at the base, these becoming evanescent in the nearly related forms. *R. 13-punctatus* and its allies are extremely variable in colour and it is difficult to define them satisfactorily; these and various other forms have a more or less distinct tooth or prominence on each side of the rostrum near the base (as seen in profile), formed by the transverse tumid space behind the antennal scrobes*.

The members of this genus are mostly found, so far as at present recorded, on the flowers of Compositæ, Asclepiadaceæ, &c., sometimes occurring gregariously on the same bush, *R. sanguineus*, *13-punctatus*, *cinctus*, *pustulosus*, and *stigmaticus* being characteristic Central-American forms.

The species inhabiting our region may be grouped thus:—

- a. Posterior femora not extending beyond the tip of the pygidium.
 - a¹. Body black; the elytra with a sanguineous fascia at the base, followed by a broad black band, the apex bluish-grey-pruinose Species 1.
 - b¹. Body black, olivaceo- or cinereo-pruinose, the punctures not indicated by cinereous spots †.
 - a². Prothorax and elytra without definite markings.
 - a³. Prothorax and elytra transversely plicate Species 2.
 - b³. Prothorax only with a transverse depression towards the base Species 3.
 - b². Prothorax and elytra with sharply-defined velvety-black spots.
 - c³. The spots large Species 4.
 - d³. The spots smaller (sometimes obsolete) Species 5, 6.
 - c¹. Body black, sometimes rufo-variegate (the elytra rarely ferruginous), the punctures on the prothorax (except in *R. guttatus*) and elytra each surrounded or indicated by a more or less distinct cinereous or brownish spot.
 - c². Elytra subequally tessellated with rather large brownish spots Species 7, 8.
 - d². Elytra with one or two darker fasciæ Species 9–16.
 - e². Elytra with velvety-black spots; antennal scape much longer than the funiculus Species 17, 18.
 - f². Elytra with a common (sometimes interrupted) v-shaped mark on the disc, and some other markings at the shoulder and near the apex, velvety-black; antennal scape and funiculus subequal in length Species 19–22.
 - g². Elytra without velvety-black spots or definite dark transverse fasciæ (sometimes rufo-variegate, or with a black patch on the disc or one or

* Hence Chevrolat's specific name *corniculatus*.

† *R. maculifer* would be almost equally well placed in this section.

two faint darker fasciæ, rarely entirely ferruginous), the cinereous spots (except in *R. arcuatus*) somewhat regularly distributed.

*e*². Prothorax with scattered cinereous spots.

*a*⁴. Rostrum short; antennal scape and funiculus subequal in length . . . Species 23, 24.

*b*⁴. Rostrum longer; antennal scape longer than the funiculus . . . Species 25-35.

*f*². Prothorax uniformly flavo-cinereo-pruinose; elytra with scattered cinereous spots, those along the suture smaller and closely packed . . . Species 36.

*d*¹. Body black or ferruginous, variegate, the prothorax (the median vitta excepted) and elytra sometimes entirely rufescent (wholly black in certain vars. of *R. pulchellus* and *R. 13-punctatus*), the punctures without definite cinereous spots*.

*h*². Prothorax at the sides and the elytra on the disc (in fresh specimens) more or less lineate or reticulate with cinereous or white, the outer black vittæ on the prothorax placed at some distance from the margin . . . Species 37.

*i*². Prothorax and elytra with velvety-black stripes, the sides of the former lineate, and the disc of the latter sharply maculate, with white . . . Species 38.

*j*². Prothorax variable in colour; elytra broadly (or narrowly) rufo-vittate on the disc . . . Species 39.

*k*². Prothorax and elytra sanguineous or ferruginous, the former with a black median line.

*g*³. Elytra immaculate . . . Species 40.

*h*³. Elytra each with a black spot on the disc . . . Species 41.

*l*². Prothorax rufous, with three black vittæ (one median, the others marginal); elytra maculate . . . Species 42-45.

*m*². Prothorax rufous, with one or two submarginal spots and a median vitta (sometimes reduced to one or two spots) black; elytra (except in dark vars.) maculate . . . Species 46-50.

b. Posterior femora extending beyond the tip of the pygidium; body fusiform, ferruginous, the prothorax with a median line, and the elytra each with a narrow oblique submedian fascia, black . . . Species 51.

1. *Rhodobænus mesomelas*, sp. n. (Tab. VI. figg. 1, 1 a, ♂.)

Elongate, subfusiform, robust, opaque above, black, pruinose; the elytra with a transverse fascia of variable width at the base sanguineous or ferruginous, the median third velvety-black, and the apical portion bluish-grey, like the prothorax, legs, and under surface. Rostrum very stout, about as long as the prothorax, strongly bowed from the moderately widened, rather long, closely punctate, sulcate basal portion, the apical portion almost smooth in the ♀ and finely punctate in the ♂, the long sulcus above continuous with the deep frontal fovea, the peduncle of the submentum with a stout tooth-like prominence in front in the ♂, this being subobsolete in the ♀. Prothorax subconical, about as long as broad, deeply bisinuate at the base, broadly excavate on the disc posteriorly, sparsely, finely punctate. Scutellum large, triangular, flattened. Elytra moderately elongate, somewhat rapidly narrowing from the rounded humeri, finely punctate-striate, the striæ apparently deeper and more coarsely punctured on the rufous basal portion of the surface, the interstices obsoletely uniseriate-punctate, somewhat convex at the base. Pygidium coarsely punctate, and with a prominent, setulose, median ridge. Beneath very sparsely and

* Faintly cinereous in fresh examples of *R. cariniventris* and *R. nigropictus*.

finely, the fifth ventral segment coarsely, punctate, the latter transversely depressed in the middle at the apex in the ♂, the ventral depression shallow in both sexes, but conspicuous in the ♂.

Length 16–19, breadth 6–7 millim. (♂ ♀.)

Hab. MEXICO, Santecomapan in Vera Cruz (*Sallé*); NICARAGUA, Chontales (*Janson*); COSTA RICA, Boca de Limon (*Pittier*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*), Chiriqui (*Trötsch*).—ECUADOR (*coll. Fry*).

Seven specimens. This insect resembles *Phyllerythrurus sanguinolentus* in colour, but it is much narrower; the rostrum is smoother and abruptly bowed from the stouter basal portion; the peduncle of the submentum is narrow and not sulcate; the middle coxæ are more narrowly separated; the elytra have the median third velvety-black, the apical portion bluish-grey-pruinose, and the fourth interstice undilated at the base; the pygidium is strongly carinate, &c.

2. *Rhodobænus plicatus*, sp. n. (Tab. VI. figg. 2, 2a, ♀.)

Elongate, robust, opaque, black, plumbeo-pruinose. Rostrum exceedingly stout, regularly arcuate, about as long as the prothorax, closely, coarsely punctate to near the tip, pilose and shallowly sulcate beneath, the moderately-widened basal portion feebly sulcate up to the frontal fovea, the apical portion more sparsely punctured in the ♀, the peduncle of the submentum in this sex with a longer and more acute prominence than in the ♂. Prothorax as long as broad, rapidly narrowed from about the middle, abruptly constricted and tubulate in front, feebly bisinuate at the base; sparsely, finely punctate, the disc transversely depressed on each side before the middle and with a larger, deeper excavation in the centre towards the base. Scutellum elongate-triangular, narrow. Elytra moderately long, gradually narrowing from the rounded humeri, with three transverse depressions on the outer part of the disc—before, at, and just beyond the middle; finely punctate-striate, the interstices faintly uniseriate-punctate. Pygidium sparsely punctate, clothed with bristly hairs at the tip. Metasternum flattened, the broad ventral excavation of the ♂ reaching forwards to beyond the middle. Legs stout; femora and tibiæ fringed with short hairs, the tibiæ broad, feebly sinuate within.

Length 14–17, breadth $4\frac{2}{3}$ –6 millim. (♂ ♀.)

Hab. COSTA RICA, La Palma (*Biolley*; *Maxon*, in *U.S. Nat. Mus.*), Carrillo (*Biolley*).

Thirteen examples. Very similar to the immaculate form of *R. stigmaticus*, but separable therefrom by the abruptly tubulate anterior portion of the prothorax, the disc of which is trifoveate, and the uneven elytra.

3. *Rhodobænus olivaceus*, sp. n. (Tab. VI. figg. 3, 3a, ♀.)

Very like the immaculate form of *R. stigmaticus* (infra); the pruinosity of the surface uniformly cinereo-olivaceous, the prothorax immaculate, the elytra sometimes slightly darker in the places occupied by the black spots in *R. stigmaticus* (at the shoulder, below it, near the suture before the middle, and on the outer part of the disc near the apex); the rostrum with the basal portion comparatively short, tumid on each side above the points of insertion of the antennæ, and abruptly bowed downwards from this place, the apical portion compressed, very sparsely punctate laterally towards the base in the ♂ and almost smooth in the ♀, the tooth-like prominence at the tip of the peduncle a little larger in the ♀ than in the ♂, the scrobes rapidly descending; ventral excavation of the ♂ long and shallow, the fifth segment alighty depressed or subfoveate at the apex; the intermediate coxæ more narrowly separated; the metasternum somewhat tumid anteriorly and with the intercoxal process conical.

Length $9\frac{1}{2}$ – $13\frac{1}{2}$, breadth $3\frac{1}{4}$ – $4\frac{1}{8}$ millim. (♂ ♀.)

Hab. PANAMA, Bugaba, Caldera, Volcan de Chiriqui (*Champion*), Chiriqui (*Trötsch*).

Eighteen specimens. Distinguishable from the immaculate forms of *R. stigmaticus* by the rostrum being abruptly bowed and compressed from the comparatively short, broad basal portion, which is tumid on each side anteriorly, and (as seen from above) appears subdentate beneath the base of the antenna, owing to the position of the rapidly descending scrobes.

4. **Rhodobænus nawradi.** (Tab. VI. figg. 4, 4 *a*, ♂, var.)

Sphenophorus nawradi, Kirsch, Berl. ent. Zeitschr. 1869, p. 233¹.

Cactophagus nawradi, Chev. Ann. Soc. Ent. Fr. 1882, p. 580².

Hab. COSTA RICA, San Carlos (*U.S. Nat. Mus.*).—COLOMBIA², Bogota¹; ECUADOR (*Buckley*), Cachabé (*Rosenberg*).

The single example from Costa Rica (fig. 4) differs from Kirsch's type (kindly communicated by Dr. Heller), and from others before me from Colombia and Ecuador, in having the median and apical velvety-black patches on the elytra united into two broad fasciæ. *R. nawradi* is a large, bluish-grey-pruinose form, with sharply-defined velvety-black markings—three on the prothorax (a large oblong patch on the disc, sometimes wanting, and a small spot near each hind angle) and three on each elytron (a spot on the shoulder, a very large, transverse, inwardly-widened patch on the disc before the middle, sometimes coalescent with the one on the opposite elytron at the suture, and a large transverse or oblique patch near the apex). The rostrum is very stout, compressed, strongly arcuate, flattened at the tip, pilose beneath, and with the peduncle of the submentum (as seen in profile) angularly projecting at its base and apex in both sexes, the apical portion a little smoother in the female than in the male. The pygidium is hairy at the tip. The femora and tibiæ are fringed with short hairs. The length varies from 13½–20 millim.

5. **Rhodobænus stigmaticus.** (Tab. VI. figg. 5, 5 *a*, ♂.)

Sphenophorus stigmaticus, Fähr. in Schönh. Gen. Curc. viii. 2, p. 244¹.

Cactophagus stigmaticollis [sic], Chev.* Ann. Soc. Ent. Fr. 1882, p. 579².

Prothorax with a triangular spot on the disc (often wanting), and sometimes a faint streak near the hind angles, black; the elytra each with four sharply-defined black spots—one, large, just below the shoulder, a smaller one, oblique or transverse, some distance lower down, a large one, subtriangular or oblique, near the suture before the middle (sometimes confluent with the one on the opposite elytron), and one, oblique, near the outer margin near the apex. Pygidium thickly clothed with bristly hairs at the tip.

♂. Rostrum very stout, arcuate, about as long as the prothorax, closely, coarsely punctate to near the tip, feebly grooved, pilose, and subcrenulate beneath, the basal portion moderately canaliculate and widened, the narrow peduncle of the submentum with a tooth at the base and an angular prominence in front; ventral excavation broad, shallow.

* Faust (Stett. ent. Zeit. 1893, p. 149) has already noted this incorrect citation of Chevrolat, which refers to *Sitophilus stigmaticollis*, Gyll., from the Ile de France.

♀. Rostrum with the apical portion a little longer and more sparsely punctate, the tooth at the base of the peduncle larger.

Length $10\frac{1}{2}$ –16, breadth $3\frac{1}{2}$ – $6\frac{1}{2}$ millim.

Var. The spots on the prothorax and elytra indistinct or obsolete, the pruinosity of the rest of the surface darker, olivaceous or plumbeous.

Cactophagus stigmaticollis, var. *cuneatus*, Chevr. loc. cit.².

Hab. MEXICO^{2 3} (coll. Sommer¹; Mus. Brit.), Playa Vicente, Orizaba, Toxpan (Sallé), Atoyac (H. H. Smith), Cordova (Knab, in U.S. Nat. Mus.), Teapa (Höge); BRITISH HONDURAS, Rio Sarstoon (Blancaneaux); GUATEMALA, San Juan in Vera Paz (Champion); NICARAGUA, Chontales (Belt, Janson, Richardson); COSTA RICA (Van Patten), Savanillas de Pirris, Pozo Azul (Underwood), La Palma, Carrillo (Biolley), Tuis (Pittier), Caché (Rogers), Tucurrique, San Carlos, Zent, Port Limon (U.S. Nat. Mus.); PANAMA, Volcan de Chiriqui (Champion).

A variable species, and separable from the closely allied *R. melanurus* (Kirsch) and *R. quadripunctatus* (Chevr.), the types of all of which I have seen, by the more finely punctured upper surface, the longer rostrum, and the non-coalescent transverse subapical black spots on the elytra, the general pruinosity uniformly coloured and uninterrupted by whitish dots. The elytra (when seen denuded) are finely uniseriate-punctate down each interstice, and the prothorax, which is more or less excavate on the disc, is impressed with similar small scattered punctures. Some of the Costa Rican examples are labelled as having been found on a species of *Piper*.

6. *Rhodobænus subcristatus*, sp. n. (Tab. VI. figg. 6, 6♂, ♀.)

Subfusiform, opaque above, black, pruinose; the elytra each with four, more or less distinct, velvety-black patches—one on the shoulder, faint, one, large and triangular, near the suture before the middle, one, small and oblique, in a line with it on the outer margin, and one, large and transverse, on the outer part of the disc near the apex, those on the disc sometimes coalescent with the others on the opposite elytron. Rostrum stout, slightly longer than the prothorax, abruptly bowed from the short, broad, coarsely punctured basal portion, which is tumid on each side anteriorly, shallowly sulcate and crenulate beneath in the ♂; the compressed apical portion carinate, and also coarsely punctate to about the middle, smoother at the sides in the ♀, and in this sex thickly set with short, semierect, fulvous, bristly hairs along the basal half above; the peduncle of the submentum also with a small prominence in front in the ♀. Antennal scape about one-half longer than the funiculus, the latter pruinose. Prothorax about as long as broad, obliquely narrowed anteriorly, transversely excavate on the disc posteriorly, very sparsely punctate. Scutellum narrow. Elytra very finely punctate-striate, the interstices flat and obsoletely uniseriate-punctate. Pygidium setulose at the tip. Ventral excavation of the ♂ shallow, the fifth segment shallowly foveate at the apex in this sex.

Length 11–13, breadth $3\frac{3}{4}$ – $4\frac{1}{2}$ millim. (♂ ♀.)

Hab. NICARAGUA (Belt: ♂); COSTA RICA, San Carlos, Turrialba (U.S. Nat. Mus.: ♂ ♀), Pozo Azul (Underwood: ♂).

Two females and three (abraded) males. This insect is related to *R. stigmaticus*, but it has the rostrum more abruptly bowed, and (at least in one sex) closely set above with short bristly hairs along the basal half of the compressed, carinate apical portion,

and the velvety-black patches on the elytra are nearly as large as in *R. nawradi*. The males are all in bad condition and they want the bristly hairs on the rostrum. It is therefore doubtful at present whether this character is peculiar to the female sex, the contrary being the case in *Rhynchophorus palmarum*.

7. *Rhodobænus tessellatus*, sp. n. (Tab. VI. figg. 7, 7a, ♀.)

♀. Very like *R. interruptus* (infra), but with the depressed brownish spots on the elytra longer and more equally distributed (showing no tendency to become coalescent into fasciæ), those on the interstices large throughout, transverse or rounded, and more or less confluent with the much smaller spots along the striæ; the spots on the prothorax closely placed, the two foveæ on the disc obsolete; the peduncle of the submentum with a more or less prominent tooth at the base; the legs stout.

Length 17-19½, breadth 6½-7⅝ millim.

Hab. GUATEMALA, Cerro Zunil, Pacific slope 4000 feet (*Champion*).

Four examples, precisely similar, except that in one of them the dentiform prominence at the base of the peduncle of submentum is smaller than in the others.

8. *Rhodobænus saginatus*, sp. n. (Tab. VI. figg. 8, 8a, ♂.)

Subelliptic, broad, robust, opaque, black, the depressions of the rather uneven surface filled with a brownish incrustation, the large spots thus formed around the punctures on the prothorax and elytra here and there confluent and giving an irregular tessellated appearance to their surface. Rostrum arcuate, a little shorter than the prothorax, very stout, somewhat closely punctate to near the tip, the basal portion moderately widened, the peduncle of the submentum with a small tubercle in front in the ♀. Antennæ stout, the funiculus pruinose. Prothorax nearly as long as broad, rounded at the sides anteriorly, moderately sinuate at the base; sparsely, rather coarsely punctate, the disc uneven and with one or two distinct foveæ on each side about midway between the base and apex. Scutellum triangular, depressed. Elytra much wider than the prothorax, oblong-subcordate, comparatively short; finely punctate-striate, the interstices each with a row of scattered punctures, the very shallow, rounded, incrustate depressions surrounding most of them as wide as the interstice itself. Pygidium sparsely punctate, setulose. Beneath sparsely, coarsely punctured; ventral excavation of the ♂ shallow. Legs robust; femora fringed with moderately long, and the dilated tibiæ with short, hairs.

Length 13½-15, breadth 5⅔-6½ millim. (♂ ♀.)

Hab. GUATEMALA, Cerro Zunil and Dueñas, 4000-5000 feet (*Champion*).

Two specimens, both from the Pacific slope. Less elongate than *R. tessellatus*, the prothorax and elytra more uneven and the brownish tessellation irregularly distributed, the prothorax distinctly bifoveate on the disc, the intermediate coxæ less approximate. Broader and more robust than the Mexican *R. pinguis*, the upper surface more uneven, the incrustation not condensed into stripes or bands.

9. *Rhodobænus interruptus*, sp. n. (Tab. VI. figg. 9, 9a, ♀.)

Oblong, rather broad, robust, opaque, black, the depressions and the umbilicate punctures of the upper and under surfaces filled with a brown or greyish-brown incrustation, the rather large spots thus formed more or less condensed on the elytra into two transverse fasciæ (one before, the other beyond the middle), the fasciæ separated and followed by a darker space. Rostrum (♂) stout, considerably shorter than the

prothorax, arcuate, the basal portion broad, sinuate at the sides, narrowly sulcate and coarsely, irregularly seriate-punctate above, the apical portion much smoother, unarmed beneath, (♀) less curved, the apical portion more slender and almost impunctate, the peduncle of the submentum in this sex with a prominent tooth at the base. Antennæ stout, pruinose. Prothorax a little broader than long, narrow and somewhat abruptly constricted at the apex, the sides strongly rounded anteriorly and subparallel at the base, the latter feebly bisinuate, coarsely, closely punctate, the punctures here and there confluent, the disc shallowly bifoveate before the middle. Scutellum triangular, small, depressed. Elytra rapidly narrowing from the rounded humeri, transversely depressed before and beyond the middle; finely punctate-striate, the interstices with an irregular series of coarse, scattered, shallow punctures. Pygidium broad, subconical, sparsely punctate, tumid down the middle posteriorly, and closely set with erect, bristly, blackish hairs at the tip. Beneath sparsely, coarsely punctate; first ventral segment slightly hollowed in the ♂. Legs stout; femora sparsely fringed with rather long, and the tibiæ densely set with short, blackish hairs in both sexes, the intermediate and posterior tibiæ sinuate within.

Length 17–22, breadth $6\frac{1}{3}$ – $8\frac{1}{5}$ millim. (♂ ♀.)

Hab. COSTA RICA (*Van Patten*), Rio Sucio, Caché, Irazu (*Rogers*), Tuis 500 metres (*Pittier*), Estrella de Cartago 1500 metres (*Biolley*), Azahar de Cartago (*Underwood*); PANAMA, Volcan de Chiriqui 2500–4000 feet (*Champion*).

Twenty-seven specimens, thirteen of which are from Chiriqui. A large, robust, oblong form, with the greyish vestiture on the elytra clustered into two transverse fasciæ, which are separated and followed by a more sparsely clothed (*i. e.* with smaller spots) blacker space. The elytra are uneven, as in *R. plicatus*.

10. *Rhodobænus dentifer*, sp. n. (Tab. VI. figg. 10, 10 a, ♀.)

♀. Elongate, subfusiform, robust, opaque, black, the depressions and the umbilicate punctures of the upper and under surfaces filled with a dense pale brown incrustation, the elytra with a more sparsely spotted blackish median fascia. Head coarsely punctate; rostrum arcuate, shorter than the prothorax, stout, becoming much thicker towards the base, coarsely punctate to about the middle and almost smooth thence to the tip, the short, broad basal portion sinuate at the sides and sulcate above, the peduncle of the submentum armed towards the apex with a stout, curved tooth. Prothorax a little longer than broad, obliquely narrowing anteriorly, abruptly constricted and tubulate in front, very feebly sinuate at the base; the surface uneven, transversely depressed on each side near the base, and somewhat closely and asymmetrically set with coarse, rounded, umbilicate punctures. Scutellum oblong-triangular, rather small. Elytra oblong, a little wider than the prothorax, finely punctate-striate, the interstices flat and set with numerous irregularly distributed, rather large, rounded, umbilicate depressions, which become more scattered across the middle. Pygidium somewhat convex, long, narrow, punctate and setulose. Beneath closely, coarsely punctate. Prosternum with two flattened, tuberculiform prominences behind the coxæ. Legs stout; femora and tibiæ closely ciliate, the tibiæ broad, curved, feebly sinuate within.

Length $18\frac{1}{2}$, breadth $6\frac{1}{3}$ millim.

Hab. COSTA RICA, La Palma 1600 metres (*Biolley*).

One specimen. Narrower than *R. interruptus*; the prothorax longer than broad, abruptly constricted in front, without foveæ on the disc before the middle; the elytra less widened anteriorly; the pygidium longer and narrower; the prosternum bituberculate at the base; the peduncle of the submentum (♀) armed with a prominent curved tooth towards the apex.

11. *Rhodobænus auriculatus*. (Tab. VI. figg. 11, 11 a, b, ♂; 12, ♀.)

♂. *Cactophagus auriculatus*, Chevr. Ann. Soc. Ent. Fr. 1882, p. 580¹.

♂. Prothorax quadrate, the anterior angles rectangularly dilated or (as in the type) with a stout, ear-like, concave prominence; rostrum lamellate on each side inferiorly for some distance beyond the points of insertion of the antennæ, closely punctate laterally, the peduncle of the submentum with a compressed angulate prominence at the base.

♀. Prothorax rounded at the sides anteriorly; rostrum longer and smoother, not lamellate laterally, the peduncle of the submentum with a stout, blunt tooth at the base.

Hab. MEXICO, Toxpam and Cosamaloapan in Vera Cruz (*Sallé*: ♂ ♀), Chiapas¹ (*Chevrolat*: ♂); GUATEMALA, Coban in Alta Vera Paz (*Conradt*: ♀); NICARAGUA, Chontales (*Belt*: ♀); COSTA RICA, Turrialba (*U.S. Nat. Mus.*: ♀).

I have seen nine examples of this species, two only of which (including the type) are of the male sex. *R. auriculatus* is very like *R. nawradi*, but may be separated from it by the relatively broader unimpressed prothorax, with less sinuate base, the small scutellum, the much longer and more compressed rostrum of the female, and the peculiar rostral and prothoracic characters of the male. The upper surface is bluish-grey-pruinose, and sprinkled with whitish dots (which indicate the position of the rather coarse scattered punctures, those of the elytral interstices being much larger than those of the striæ), the elytra with two broad, suturally interrupted, velvety-black fasciæ, one median, the other subapical. The rostrum is gradually widened towards the base, and the femora and tibiæ are closely fimbriate with short hairs, in both sexes; the prominent, subconical pygidium is also closely set with long bristly hairs at the tip; and the ventral depression of the male is very shallow. The length varies from $16\frac{1}{2}$ –23 mm.

12. *Rhodobænus fortirostris*, sp. n. (Tab. VI. figg. 13, 13 a, ♂.)

Oblong-elliptic, rather broad, opaque, black, brownish- or plumbeo-pruinose, the scattered punctures each surrounded by a rounded, pale brown spot, the elytra with two more or less distinct, common, velvety-black, transverse fasciæ—one median, widened towards the suture, the other subapical. Rostrum (♂) barely as long as the prothorax, stout, compressed, and (as seen in profile) greatly thickened towards the base and strongly arcuate above, coarsely closely punctate to near the tip, (♀) straighter, smoother, and less thickened basally, the peduncle of the submentum with a short tooth at the base in this sex. Antennæ stout, the funiculus pruinose. Prothorax about as long as broad, rounded at the sides anteriorly and feebly constricted in front (in one ♂ from Toxpam with a small angular prominence on each side just behind the subapical constriction), feebly bisinuate at the base; rather coarsely, somewhat closely punctate. Scutellum triangular. Elytra finely punctate-striate, the interstices rather coarsely uniseriate-punctate. Pygidium sparsely punctured, clothed with bristly hairs at the tip. Ventral excavation of the ♂ shallow. Femora and tibiæ fringed with short hairs.

Length 10–13, breadth $3\frac{9}{10}$ – $6\frac{1}{2}$ millim. (♂ ♀.)

Hab. MEXICO, Toxpam in Vera Cruz (*Sallé*: ♂ ♀); GUATEMALA, Purula in Vera Paz (*Champion*: ♂).

Six males and one female, varying greatly in size, one only of the males (fig. 13) with a small angular prominence at the sides of the prothorax near the apex, the

species thus showing an affinity with *R. auriculatus*, which has similarly fasciate elytra; but the latter is more elongate than *R. fortirostris* and has a longer, conical pygidium, a differently-formed rostrum in both sexes, &c. The strongly arcuate, powerful rostrum of the male, the finer puncturing of the surface, the less elongate shape, and smaller size separate *R. fortirostris* from *R. interruptus*.

13. ***Rhodobænus biundulatus***, sp. n. (Tab. VI. figg. 14, 14 a, ♀.)

Elongate, subfusiform, opaque above, black, pruinose, the somewhat closely placed punctures each surrounded by a denser, rounded, brownish-cinereous spot, the elytra with two angulate fasciæ (one before, the other just beyond the middle, the broad intervening space appearing blacker than the rest of the surface) formed by a similarly-coloured incrustation. Rostrum shorter than the prothorax, stout, abruptly bowed from the moderately widened, narrowly sulcate basal portion, closely punctate to near the tip, the peduncle of the submentum angulate or with a minute prominence in front, the rather broad, outwardly-widened antennal scape nearly reaching the apex. Prothorax slightly longer than broad, abruptly and obliquely narrowed anteriorly and somewhat compressed at the sides towards the base, the base itself feebly bisinuate, the disc transversely excavate posteriorly; moderately closely punctate. Scutellum elongate-triangular, narrow, hollowed down the middle. Elytra much wider than the prothorax, narrowed from the rounded humeri, transversely depressed below the base and beyond the middle; finely punctate-striate, the interstices each with a row of scattered rather coarse punctures. Pygidium conical, pilose at the tip. First ventral segment of the ♂ obsoletely grooved down the middle. Femora fringed beneath with scattered hairs.

Length $11\frac{1}{2}$ – $12\frac{1}{4}$, breadth 4 – $4\frac{1}{5}$ millim. (♂ ♀.)

Hab. MEXICO (*Sallé, Flohr*), Misantla in Vera Cruz (*Höge*).

Four specimens, the one with a faintly grooved first ventral segment assumed to be a male. Distinguished by the two angulate cinereous elytral fasciæ, which are separated by a blackish space; the excavate, anteriorly constricted prothorax; and the comparatively short, stout rostrum. The elytra are uneven, as in the larger and more robust *R. plicatus*.

14. ***Rhodobænus tenuiscapus***, sp. n. (Tab. VI. figg. 15, 15 a, ♂.)

Elongate, subfusiform, opaque above, black, greyish-pruinose, the somewhat closely-placed punctures each surrounded by a denser brownish-cinereous dot, the elytra with a complete, rather broad, more or less distinct black fascia just before the middle. Rostrum stout, about as long as the prothorax, abruptly bowed inwards from the broad, closely punctate, narrowly sulcate basal portion, the apical portion compressed, sparsely punctate in the ♂, and a little longer and almost smooth in the ♀, angulate towards the tip beneath (as seen in profile) in both sexes, the peduncle of the submentum with a blunt tooth in front in the ♀. Scape of the antennæ long and slender, thickened towards the apex. Prothorax longer than broad, conical, feebly bisinuate at the base, rather sparsely punctate. Scutellum elongate-triangular. Elytra long, much wider than the prothorax, narrowing from the base, finely punctate-striate, the interstices each with a row of rather coarse scattered punctures. Pygidium large, subconical, rounded at the tip, sparsely punctate. Beneath very sparsely punctured; ventral excavation of the ♂ broad and deep, extending far forwards along the metasternum, the corresponding space slightly hollowed in the ♀. Legs elongate; femora fringed with long scattered hairs beneath.

Length $10\frac{1}{2}$ –15, breadth $3\frac{2}{5}$ – $5\frac{1}{5}$ millim. (♂ ♀.)

Hab. COSTA RICA, Irazu (*Rogers*), Azahar de Cartago (*Underwood*).

Three males and one female, varying in size and in the sculpture of the prothorax.

Very like *Homalostylus nigrofasciatus*, but separable therefrom by the slender, apically thickened antennal scape, the non-crenulate rostrum of the male, the non-excavate prothorax, &c.

15. **Rhodobænus pinguis.** (Tab. VI. figg. 16, 16 a, ♀.)

Rhodobænus pinguis, Chevr. Ann. Soc. Ent. Fr. 1885, p. 283¹.

Broad, black, above and beneath sometimes rufo-variegate, the shallow depressions and punctures of the surface each filled with a brownish-cinereous incrustation, the larger rounded spots thus formed more or less condensed into two broad vittæ on the disc of the prothorax and two irregular transverse fasciæ on the elytra (one before, the other beyond the middle), the space between the fasciæ in great part black. Rostrum stout, strongly arcuate, the apical portion smoother in the ♀ than in the ♂ and with an angular prominence near the tip beneath. Ventral excavation of the ♂ broad and rather shallow.

Length 12–13½, breadth 5–5½ millim. (♂ ♀.)

Hab. MEXICO¹ (*Truqui*), Cuernavaca (*C. C. Deam*, in *U.S. Nat. Mus.*), Juquila (*Sallé*), Tehuantepec (*Mus. Brit.*).

I have seen eleven examples of this species, including the type (♂), and these show scarcely any variation. *R. pinguis* may be described as a broad, robust form of the variable *R. pustulosus* with the large intermixed greyish spots on the elytra condensed into two fasciæ and the space between them in great part black.

16. **Rhodobænus confusus.** (Tab. VI. figg. 17, 17 a, ♀.)

Rhodobænus confusus, Chevr. Ann. Soc. Ent. Fr. 1885, p. 285¹.

♂. Rostrum shorter than the prothorax, abruptly bent inwards from the widened basal portion, closely punctate to near the tip, the peduncle of the submentum angulate or with an inconspicuous prominence in front; ventral excavation narrow, almost obsolete.

♀. Rostrum with the apical portion smoother and a little longer, the peduncle of the submentum sharply dentate in front.

Length 9–11, breadth 3¼–3½ millim.

Hab. MEXICO (*Truqui*; *Mus. Brit.*; *Flohr*), Toxpam (*Sallé*¹), Jalapa, Cerro de Palmas (*Höge*).

Apparently not rare in Eastern Mexico. This is a species somewhat resembling *R. pustulosus*, with two broad, transverse, cinereous fasciæ on the elytra (one below the base, the other beyond the middle) separated by a still broader black space, upon which the cinereous dots along the interstices are more or less conspicuous. The tooth on the peduncle of the submentum of the female is long and prominent, when the insect is viewed in profile. Amongst the seventeen specimens before me, some are obscure ferruginous maculate with black; the female appears to be commoner than the male.

17. **Rhodobænus maculifer.** (Tab. VI. figg. 18, 18 a, b, ♂.)

Sphenophorus maculifer, Fähr. in Schönh. Gen. Curc. viii. 2, p. 243¹; Chevr. Ann. Soc. Ent. Fr. 1885, p. 111².

Rhodobænus centromaculatus, Chevr. loc. cit. pp. 276, 280³.

Subfusiform, rather narrow, opaque above, varying in colour from black to ferrugineous, with the prothorax nigro-trivittate and the elytra black in the spaces occupied by the velvety spots, plumbeo-pruinose, the scattered fine punctures each surrounded with a small cinereous dot, the elytra each with three sharply-defined, large, velvety-black spots—one just below the shoulder, one near the suture before the middle, and one, transverse, on the outer part of the disc towards the apex. Rostrum abruptly bowed downward from the short, broad, coarsely punctured basal portion, the latter tumid on each side anteriorly, the apical portion strongly compressed, almost smooth at the sides in the ♀ and sparsely punctate basally in the ♂, the peduncle of the submentum with a small prominence in front in the ♀. Antennal scape about twice as long as the funiculus. Prothorax as long as, or a little longer than, broad, obliquely narrowed in front, transversely excavate on the disc posteriorly, very sparsely, finely punctate. Pygidium subconical, pilose at the tip. Ventral excavation of the ♂ broad, the first segment with a small compressed tubercle in the middle in this sex (fig. 18 *b*), the fifth often with a shallow fovea. Metasternum becoming tumid towards the narrow, conical, intercoxal process.

Length 8–12, breadth $2\frac{1}{4}$ – $3\frac{7}{8}$ millim. (♂ ♀.)

Hab. MEXICO (*coll. Sommer*¹; *Mus. Brit.*), Toxpan, Playa Vicente, and Sante-comapan in Vera Cruz (*Sallé*), Atoyac, Teapa (*H. H. Smith*), Juquila (*Höge*); GUATEMALA, Cubilguitz, San Gerónimo, Purula, Panima, Sabo, and San Juan in Vera Paz (*Champion*), Trece Aguas (*U.S. Nat. Mus.*).—? SOUTH AMERICA, Cayenne².

Found in numbers in various places on the Atlantic slope of Southern Mexico and Guatemala; the locality quoted by Chevrolat for *R. centromaculatus*, Cayenne², must have been due to some mistake in labelling: I have seen his type and also that of Fähræus, and they are absolutely similar. This species is easily separable from *R. stigmaticus* by the laterally tumid antero-basal portion of the rostrum (which is formed as in *R. olivaceus* and *R. subcristatus*) and the longer scape to the antennæ. The light-coloured examples have a purplish tint. The smoother, non-cristate rostrum, the presence of a small compressed tubercle on the first ventral segment of the male, and the sharply-defined large velvety-black spots on the elytra separate *R. maculifer* from *R. subcristatus*. In one abraded reddish example only (?immature), from Sabo, the elytral spots are obsolete.

18. *Rhodobænus sexguttatus*, sp. n. (Tab. VI. figg. 19, 19 *a*, ♀.)

Moderately elongate, obscure rufous variegated with black, the black markings on the prothorax condensed into five incomplete stripes (the median one not reaching the base, the submarginal ones abbreviated anteriorly, and the one on each flank oblique), the elytra each with three large velvety-black spots (one at the shoulder, one on the disc, triangular or subquadrate, somewhat distant from the suture, at about one-third from the base, and one, still larger, near the apex) and a smaller indistinct blackish spot at about the middle of the outer margin; the rest of the surface cinereo-pruinose, the punctures each surrounded by a rather large rounded whitish or pale brown spot. Rostrum stout, regularly arcuate, in the ♂ a little shorter than the prothorax and closely coarsely punctate to near the tip, in the ♀ smoother and slightly longer, the basal portion moderately widened, the peduncle of the submentum angulate anteriorly, very narrow, and compressed. Prothorax about as long as broad, obliquely narrowed anteriorly, feebly bisinuate at the base; sparsely, rather coarsely punctate, transversely depressed on the disc posteriorly. Scutellum elongate-subtriangular, narrow. Elytra finely punctate-striate, the interstices uniseriate-punctate. Pygidium sparsely punctate, clothed with bristly fulvous hairs at the tip. Ventral excavation of the ♂ shallow. Femora fringed with long, the tibiæ with short, hairs.

Length 10–11½, breadth $3\frac{1}{2}$ –4 millim. (♂ ♀.)

Hab. MEXICO (*Mus. Brit.*), Catemaco, Toxpam, Santecomapan (*Sallé*), Misantla (*Höge*).

Seven specimens, the localities enumerated being all in Vera Cruz. This species resembles *R. maculifer*, Fähr. (= *centromaculatus*, Chevr.), but it has the rostrum subcylindrical and less swollen on each side towards the base, the scape shorter, the spot on the disc of each elytron placed a little nearer the one at the shoulder (and therefore more distant from the suture), and the metasternum somewhat flattened anteriorly. From the Colombian *R. quadripunctatus*, the present insect may be known by its narrower form, the subcylindrical, more slender rostrum, the different arrangement of the velvety-black spots on the elytra, and the less thickened legs.

19. *Rhodobænus crassipes*, sp. n. (Tab. VI. figg. 20, 20 *a*, ♂.)

♂. Subelliptic, robust, opaque, black, closely cinereo-pruinose, the scattered punctures on the prothorax and those along each elytral interstice each surrounded by a denser cinereous dot, the elytra with a common, large, v-shaped patch at about the middle, a complete, outwardly-widened, subapical fascia, and a spot on the shoulder, velvety-black or brownish-black, the prothorax with indications of a darker lanciform median vitta and an interrupted stripe on each side of the disc. Rostrum about as long as the prothorax, very stout, moderately curved, and strongly inflexed, sparsely, finely punctate, bare at the apex, setulose and shallowly sulcate beneath, the peduncle of the submentum rounded at the tip, the widened basal portion canaliculate. Antennæ stout, pruinose throughout, the funiculus as long as the scape, its outer joints strongly transverse. Prothorax broader than long, the sides rounded anteriorly and parallel at the base, the base deeply bisinuate; sparsely, finely punctate, the disc with a very shallow foveiform depression on each side at about the middle. Scutellum small, concave, oblong-subtriangular. Elytra finely punctate-striate, the interstices broad, flat, each with a row of small, scattered, conspicuous punctures. Pygidium sparsely punctate, setulose at the tip. Beneath very sparsely, finely punctate; ventral depression broad, extending forwards to beyond the middle of the metasternum. Legs stout, comparatively short; femora fringed with rather long, the tibiæ with short, hairs; third tarsal joint moderately large, spongy-pubescent in its outer half beneath.

Length $10\frac{1}{2}$ – $11\frac{1}{2}$, breadth 4 – $4\frac{2}{5}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

Three examples, one coated with a brownish incrustation. Very near the Colombian *R. (Cactophagus) 4-punctatus*, Chevr., and the Peruvian *R. (Sphenophorus) melanurus*, Kirsch (the types of both of which I have seen), but differing from these insects in having a large, common, v-shaped, velvety-black or dark patch on the disc of the elytra.

20. *Rhodobænus v-nigrum*, sp. n. (Tab. VI. figg. 21, 21 *a*, ♀.)

Somewhat fusiform, moderately elongate, robust, opaque, black, closely cinereo-pruinose, the scattered punctures on the prothorax, elytral interstices, flanks, and femora each surrounded by a larger or smaller, denser, cinereous dot, the prothorax with a lanciform median vitta and a space along the sides indeterminate darker; the elytra with a common, large, v-shaped patch at about the middle, an interrupted subapical fascia, an oblong patch at the shoulders, and the sutural region for some distance below the base, velvety-brownish-black. Rostrum very stout, abruptly curved from the broader basal portion, bowed at the tip in the ♂, finely punctate, setulose and shallowly sulcate beneath, the peduncle of the

submentum with a dentiform prominence at the base and apex in the ♀, these prominences wanting in the ♂. Funiculus pruinose, stout, about as long as the scape, the outer joints strongly transverse. Prothorax broader than long, sparsely punctate. Scutellum oblong-subtriangular. Elytra comparatively short, obliquely narrowed posteriorly, finely punctate-striate, the interstices each with a row of scattered punctures, which are indicated by a larger or smaller spot. Pygidium subconical, sparsely punctate, setulose at the tip. Ventral excavation of the ♂ very broad and extending forwards. Legs stout; femora fringed with rather long, the tibiæ with short, hairs.

Length $9\frac{1}{2}$ – $9\frac{3}{4}$, breadth $3\frac{1}{2}$ – $3\frac{3}{4}$ millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Janson*).

One pair. This is the Nicaraguan representative of *R. crassipes*, differing from that insect in its somewhat fusiform shape and the more mottled upper surface. The common v-shaped dark patch on the elytra is greatly developed in both species. A much larger unarmed allied form from Ecuador is contained in the Fry collection.

21. *Rhodobæus nigrosignatus*, sp. n. (Tab. VI. figg. 22, 22 a, ♀.)

Subfusiform, narrow, opaque above, ferruginous variegated with black, the black markings on the prothorax condensed into three narrow incomplete vittæ on the disc (the central one sometimes wider and lanciform), and those on the elytra to the spaces covered by the velvety patches; cinereo-pruinose, the punctures each surrounded by a larger or smaller, denser, cinereous dot, the elytra each with three sharply-defined, subtriangular, oblique, velvety-black patches—one at the shoulder, one on the disc before the middle (these two usually coalescent), and one on the outer part of the disc towards the apex,—the prothorax also with a more or less distinct, lanciform, velvety-black median streak. Rostrum very stout, feebly curved, abruptly bowed from the widened basal portion, shorter than the prothorax, closely punctate, smoother at the tip in the ♀, shallowly sulcate and setulose beneath, the peduncle of the submentum compressed and subangulate at the base in the ♀, rounded in the ♂. Antennal scape much widened towards the tip. Prothorax as long as broad, subcylindrical, constricted in front, feebly bisinuate at the base, transversely depressed on the disc posteriorly; sparsely, irregularly punctate. Scutellum long, narrow. Elytra oblong, transversely depressed at the base and beyond the middle, finely punctate-striate, the interstices each with a row of widely scattered punctures. Pygidium conical, sparsely punctate, setulose at the tip. Ventral excavation of the ♂ very shallow. Tibiæ somewhat curved, fringed with extremely short hairs, the femora with longer scattered hairs.

Length $5\frac{1}{2}$ – $8\frac{3}{4}$, breadth $1\frac{3}{4}$ –3 millim. (♂ ♀.)

Hab. GUATEMALA, San Juan in Alta Vera Paz, Las Mercedes, Cerro Zunil, Zapote (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Thirteen examples. A remarkably distinct form, varying greatly in size and to a certain extent in the development of the sharply-defined velvety-black markings on the elytra, those on the disc being sometimes united at the suture and forming a common, v-shaped patch as in *R. v-nigrum* and *R. crassipes*. The elytral surface is depressed on the disc before and between the black markings, the latter thus becoming very conspicuous.

22. *Rhodobæus cylindricollis*, sp. n. (Tab. VI. figg. 23, 23 a.)

Very like *R. nigrosignatus*. Picuous, brownish-cinereo-pruinose, the punctures on the elytral interstices each surrounded by a denser cinereous dot; the prothorax with a narrow lanciform median streak, and the

elytra with a common, large, v- or heart-shaped patch before the middle, an oblique triangular patch at the shoulder, and a large rounded patch on the outer part of the disc towards the apex, velvety-black. Rostrum very stout, coarsely punctate to the tip. Antennal scape very little longer than the funiculus. Prothorax slightly longer than broad, subcylindrical, constricted just beyond the middle and at the apex, and obliquely narrowed at the base, the base itself subtruncate; closely impressed with coarse umbilicate punctures. Elytra very little longer than the prothorax, the interstices 3, 5, and 7 here and there somewhat convex, the scattered punctures on all of them conspicuous and the cinereous incrustation surrounding some of them also raised.

Length $5-6\frac{1}{2}$, breadth $1\frac{3}{4}-2\frac{1}{8}$ millim. (? ♀.)

Hab. MEXICO, Cuernavaca in Morelos (*Deam, in U.S. Nat. Mus.*).

Two specimens. Readily distinguishable from the southern *R. nigrosignatus* by the basally narrowed prothorax, the prothorax itself coarsely umbilicate-punctate, and the relatively shorter and more uneven elytra. The first ventral segment is unimpressed.

23. *Rhodobænus brevirostris*, sp. n. (Tab. VI. figg. 24, 24 a, ♂.)

Elongate, subfusiform, opaque above, black, sometimes variegated with ferruginous (the ♀ ferruginous above, with the prothorax nigro-trivittate and the elytra each with an indeterminate black patch on the disc before the middle); pruinose, the scattered punctures each surrounded by a larger or smaller, rounded, cinereous or yellowish-cinereous spot. Rostrum stout, feebly curved, in the ♂ very little more than half the length of the prothorax, slightly longer in the ♀, sparsely punctate, smooth and shining at the tip, unarmed at the apex beneath, the widened basal portion more closely punctured and narrowly sulcate. Antennal scape about as long as the funiculus. Prothorax a little longer than broad, subconical, bisinuate at the base, transversely excavate on the disc posteriorly, sparsely punctate. Scutellum elongate-triangular. Elytra oblong, considerably wider than the prothorax, finely punctate-striate, the punctures of the striæ each indicated by a minute cinereous dot, the interstices each with a scattered row of punctures surrounded by a larger cinereous spot. Pygidium conical, sparsely punctate, setulose. Ventral excavation of the ♂ long and deep, extending the whole length of first segment. Femora fringed with rather long hairs beneath.

Length $9-11\frac{1}{2}$, breadth $3-3\frac{9}{10}$ millim. (♂ ♀.)

Hab. MEXICO, Xautipa in Guerrero (*H. H. Smith*: ♀); GUATEMALA, Volcan de Atitlan and San Isidro, Pacific slope (*Champion*: ♂).

Two males and one female, the latter partly ferruginous above. Near *R. adspersus*, but relatively narrower, and with a comparatively short unarmed rostrum in both sexes and a more elongate prothorax. The excavate disc of the latter separates *R. brevirostris* from *R. nigrolineatus*, and the short rostrum from *R. andreae*.

24. *Rhodobænus veræpaciis*, sp. n. (Tab. VI. figg. 25, 25 a, ♂.)

♂. Elongate, subfusiform, opaque above, black indeterminately mottled with rufo-piceous, the elytra each with a triangular black patch on the inner part of the disc before the middle; pruinose, the scattered punctures of the surface each surrounded by a small cinereous dot. Rostrum feebly curved, stout, very little more than half the length of the prothorax, sparsely punctate, unarmed at the apex beneath, the widened basal portion narrowly sulcate, the antennal scape nearly reaching the tip and about as long as the funiculus. Prothorax subconical, longer than broad, feebly bisinuate at the base, transversely excavate on the disc posteriorly, sparsely, finely punctate. Scutellum elongate-triangular. Elytra oblong, much wider than the prothorax, finely punctate-striate, the interstices each with a row of

scattered punctures. Pygidium conical, sparsely punctate, pilose at the tip. Ventral excavation long and deep. Femora sparsely fringed with long hairs beneath. Intermediate tibiae sinuate within. Length $12\frac{1}{2}$, breadth $4\frac{1}{4}$ millim.

Hab. GUATEMALA, San Juan in Alta Vera Paz (*Champion*).

One male. An elongate form, with an unusually long, subconical, excavate prothorax, and a very short, feebly curved rostrum (as in *R. brevirostris*), the punctures of the upper surface each surrounded by a small cinereous dot, much as in *R. adspersus*.

25. **Rhodobænus arcuatus**, sp. n. (Tab. VI. figg. 26, 26 a, ♂.)

Elongate, subfusiform, narrow, opaque above, black, rufo-variegate, the rufous markings on the prothorax condensed into two vittæ on the disc, and those on the elytra into a short longitudinal stripe on the disc at the base and a common, arcuate, suturally-interrupted fascia on the median third (partly enclosing a common, large, heart-shaped, black patch, which extends along the suture to the base); the punctures each surrounded by a minute whitish dot, the dots on the elytra indistinct upon the dark portions of the surface; the legs in great part rufous. Rostrum as long as the prothorax, abruptly deflexed and arcuate from the broad, closely-punctate basal portion, the apical portion compressed, almost smooth from near the base, in the ♀ a little longer, more slender, and with a compressed prominence at the tip beneath. Antennal scape nearly twice as long as the funiculus in the ♀. Prothorax longer than broad, obliquely narrowed anteriorly, the sides parallel behind, the base bisinuate; somewhat closely, finely punctate, except down the middle, the disc with a transverse arcuate depression towards the base. Scutellum elongate-triangular, narrow. Elytra oblong, a little wider than the prothorax, very finely punctate-striate, the interstices each with a row of widely scattered minute punctures. Pygidium long, conical. Beneath very sparsely punctured; ventral excavation of the ♂ long and deep, extending far forwards along the metasternum, the first segment with a compressed tubercle in the middle in front. Femora ciliate beneath.

Length $8\frac{1}{2}$ - $9\frac{1}{2}$, breadth $2\frac{1}{2}$ -3 millim. (♂ ♀.)

Hab. MEXICO, Toxpan in Vera Cruz (*Sallé*: ♂); NICARAGUA, Chontales (*Belt*: ♀).

Two males and one female. An elongate, narrow form, obscure ferruginous maculated with black, and with the minute whitish dots mostly placed on the reddish portions of the surface; the prothorax considerably longer than broad, and with a transverse arcuate depression towards the base; the pygidium long and prominent; the ventral tubercle of the male conspicuous. *R. arcuatus* has much the facies of *Homalostylus dentirostris*.

26. **Rhodobænus andreæ**. (Tab. VI. figg. 27, 27 a, ♀.)

Rhodobænus andreæ, Chevr. Ann. Soc. Ent. Fr. 1885, p. 279¹.

♀. Elongate, somewhat fusiform, opaque above, black variegated with ferruginous; the prothorax ferruginous with a narrow black stripe down the middle and another along the sides, the elytra ferruginous, each with an oblique blackish median fascia on the disc and a fainter one midway between this and the apex (neither reaching the suture, and both sometimes almost obsolete); the rather closely-placed punctures each surrounded by a rounded yellowish-white spot, those along the elytral interstices somewhat regularly arranged, and the numerous fine punctures of the striae each indicated by a smaller oval spot. Rostrum with the basal portion short, abruptly widened, and narrowly sulcate, the apical portion long, somewhat compressed, almost smooth, and armed with a small dentiform prominence at the tip of the peduncle.

beneath, the antennæ inserted close to the eyes, the latter large. Prothorax as long as broad, subconical, transversely excavato on the disc posteriorly, somewhat closely punctate. Scutellum elongate-triangular, narrow. Elytra elongate, much wider than the prothorax, finely punctate-striate, the punctures of the striæ closely placed, the interstices flat, uniseriate-punctate.

Length 11–12½, breadth 3¾–4⅝ millim.

Hab. MEXICO¹ (*Flohr*), Juquila (*Höge*).

♂. *Var.?* Rostrum with the apical portion feebly curved, almost smooth, unarmed at the tip beneath; prothorax, elytra, and legs ferruginous, the prothorax trivittate as in the ♀, the elytra without darker markings on the disc, the punctures on the upper surface each surrounded by a whitish spot; first ventral segment narrowly impressed in the middle in front.

Length 10, breadth 3¼–3⅝ millim.

Hab. MEXICO, Omilteme in Guerrero (*H. H. Smith*).

I have seen three females of this insect—two with the rostrum long and feebly curved (including the type), and one with the rostrum much shorter and abruptly deflexed. The two examples (? immature) from Omilteme are probably males of the same species. Chevrolat¹ states that the black markings on the elytra resemble a St. Andrew's cross. The "type" communicated by Dr. Sjöstedt differs in various particulars from the above description, but there is no reason to suppose it was wrongly named.

27. *Rhodobænus nebulosus*, sp. n. (Tab. VI. figg. 28, 28 a, ♀.)

Subfusiform, opaque above, obscure ferruginous variegated with black, the black predominating on the under surface, that on the prothorax condensed into a median stripe and another along the sides, and that on the elytra into four patches on each of them (one, oblique, just below the shoulder, one, large, triangular, near the suture a little before the middle, one, small, in a line with it on the outer margin, and one, transverse, on the disc towards the apex); brownish-grey-pruinose, the punctures each surrounded by a larger or smaller, denser, pallid spot. Rostrum (♂) curved, almost as long as the prothorax, moderately stout, closely punctate to near the tip, unarmed beneath, the short, broad basal portion feebly sulcate, (♀) with the apical portion much longer, more slender, and smooth, and the peduncle of the submentum armed with a small tooth in front. Antennal scape long, slender, thickened at the tip. Prothorax subconical, slightly longer than broad, sparsely punctate, the disc with a transverse, arcuate excavation towards the base. Scutellum elongate-triangular. Elytra much wider than the prothorax, narrowing from the base, finely punctate-striate, the punctures each indicated by a minute pallid dot, the interstices each with a row of widely scattered punctures, those along the suture somewhat closely placed and with a smaller spot. Pygidium conical, pilose at the tip. Ventral excavation of the ♂ very shallow. Legs rather slender; femora sparsely ciliate beneath.

Length 8¾–10½, breadth 3–3½ millim. (♂ ♀.)

Hab. MEXICO, Toxpam in Vera Cruz (*Sallé*).

Two females and one male. Narrower than *R. adpersus*, obscure ferruginous above, the elytra each with four blackish patches and the space between somewhat densely pruinose, the dots along the suture closely placed, the rostrum of the female slender and a little longer than the head and prothorax united. The arcuate impression on the prothorax is deep.

28. *Rhodobænus adpersus*. (Tab. VI. figg. 29, 29 *a*, ♀.)

Sphenophorus adpersus, Gyll. in Schönh. Gen. Curc. iv. p. 924¹; viii. 2, p. 247².

Rhodobænus adpersus, Chevr. Ann. Soc. Ent. Fr. 1885, p. 283³.

Var. *Rhodobænus impressus*, Chevr. loc. cit.⁴

♂. Rostrum abruptly bowed from the short, broad basal portion, about as long as the prothorax (seen from the side), closely punctate to near the tip; ventral depression broad, extending far forwards along the metasternum.

♀. Rostrum with the apical portion a little longer and almost smooth, the peduncle of the submentum with a small dentiform prominence in front.

Length 9-13, breadth $3\frac{1}{8}$ - $4\frac{4}{5}$ millim.

Hab. MEXICO ¹⁻⁴ (*Flohr*), Orizaba, Chiapas, Juquila (*Sallé*), Omilteme in Guerrero (*H. H. Smith*); GUATEMALA, Senahu in Alta Vera Paz (*Haase*, in *U.S. Nat. Mus.*).

Found in numbers in the mountains at Omilteme. Distinguishable from its nearest allies by the conical, transversely excavate prothorax, the rather broad, subtriangular elytra, and the small, scattered, yellowish or whitish dots on the upper surface (the elytra sometimes with a darker patch on each side of the suture just before the middle), and the sub-bituberculate base of the prosternum. I have seen Gyllenhal's type.

29. *Rhodobænus valens*, sp. n. (Tab. VI. figg. 30, 30 *a*, ♂; 31, ♀.)

Subelliptic, broad, robust, opaque above, black variegated with red; the red markings on the prothorax condensed into two curved, posteriorly divergent vittæ on the disc (sometimes abbreviated behind or interrupted) and a short streak on the flanks; the elytra red, with the scutellar region, a subtriangular patch on the inner part of the disc before the middle, a common oblong patch along the suture at the apex, and three oblique or subtriangular marks along the sides, black; the meso- and metasternum rufo-maculato laterally; the scattered punctures each with a whitish dot. Rostrum stout, shorter than the prothorax, abruptly bowed from the broad, sulcate basal portion, sparsely punctate to near the tip, and subangulate towards the apex beneath, in the ♀ a little longer and smooth, and with a small prominence at the tip of the peduncle. Prothorax as broad as long, rounded at the sides anteriorly, the sides parallel behind; sparsely, shallowly, rather finely punctate. Elytra much wider than the prothorax, finely punctate-striate, the interstices each with a row of scattered shallow punctures. Ventral excavation of the ♂ broad, deep, extending far forwards along the metasternum.

Length $12\frac{1}{2}$ - $15\frac{1}{2}$, breadth 5- $6\frac{1}{8}$ millim. (♂ ♀.)

Hab. MEXICO (*Truqui*), Cuernavaca (*Sallé*, *Höge*, *H. H. Smith*; *Schaus*, in *U.S. Nat. Mus.*).

Eight specimens, seven of them found by various collectors at long intervals at Cuernavaca. A large, broad, robust form of *R. pustulosus*, which also occurs at the same locality, with minute scattered whitish dots and the rufous coloration condensed into sharply-defined markings on the prothorax, elytra, and metasternum. The var. *puncticollis*, Chevr., of *R. pustulosus*, is of about the same size, but it has larger cinereous spots. From *R. pinguis* the present species is easily distinguished by its more elongate form and the very sparse incrustation.

30. Rhodobænus pustulosus. (Tab. VI. figg. 32, 32 a, ♀.)

Sphenophorus pustulosus, Gyll. in Schönh. Gen. Curc. iv. p. 923¹; viii. 2, p. 247²; Horn, Proc. Am. Phil. Soc. xiii. p. 415³.

Rhodobænus pustulosus, Lec. Proc. Am. Phil. Soc. xv. p. 332⁴.

Rhodobænus pustulatus (sic), Chevr. Ann. Soc. Ent. Fr. 1885, p. 283⁵.

Rhodobænus alboscuteUellatus, Chevr. loc. cit. p. 284⁵.

Var. β (*Calandra punctata*, Dej. Cat.), Gyll. in Schönh. Gen. Curc. iv. p. 923⁷.

Rhodobænus pustulatus, var. β . *puncticollis*, Chevr. loc. cit. p. 283⁵.

♂. Rostrum with the apical portion sparsely punctate to near the tip, at most feebly subangulate towards the apex beneath (as seen in profile); ventral excavation broad, shallow, long.

♀. Rostrum with the apical portion much smoother, the peduncle of the submentum dentate at the base and in front.

Length $8\frac{1}{2}$ – $15\frac{1}{2}$, breadth 3– $5\frac{1}{2}$ millim.

Hab. NORTH AMERICA, Arizona^{3 4}.—MEXICO^{1 2 4-8} (*Mus. Brit.*; *ex coll. Sturm*; *Truqui*), N. Sonora (*Morrison*), Pinos Altos in Chihuahua (*Buchan-Hepburn*), Puebla, Izucar, Toxpan, Orizaba, Capulalpam, Parada, Panistlahuaca (*Sallé*), Juquila (*Sallé*, *Höge*), Oaxaca (*Mus. Brit.*), Cuernavaca (*Höge*, *Wickham*), Misantla, Cerro de Palmas, Tapachula (*Höge*), Xautipa, Chilpancingo, Tepetlapa (*H. H. Smith*); GUATEMALA (*Sallé*), Cubulco, Capetillo, Dueñas (*Champion*).

Found in abundance at Capetillo and also in some of the Mexican localities. A very variable insect and extremely difficult to define. It may chiefly be recognized by its comparatively broad form; the more or less rounded sides of the prothorax; the somewhat closely placed, rather large, cinereous spots on the upper surface (which are always more crowded along the elytral suture); the bidentate peduncle of the submentum of the female; and the broad ventral depression of the male. The elytra often have a darker triangular patch near the suture before the middle and they are sometimes wholly or in part ferruginous, the prothorax, too, in light-coloured examples is broadly rufo-bivittate on the disc. The under surface (except down the middle) in many of the fresh specimens before me is covered with a uniform brownish-white incrustation. *R. alboscuteUellatus*, Chevr., is based upon a clean example (fig. 32) with a pruinose white scutellum, and the var. β (*=puncticollis*, Chevr.) (the types of all of which I have seen) upon worn individuals of the same species.

31. Rhodobænus varieguttatus. (Tab. VI. figg. 33, 33 a, ♀.)

Rhodobænus varieguttatus, Chevr. Ann. Soc. Ent. Fr. 1885, p. 284¹.

♂. Rostrum with the apical portion coarsely punctate at the base, unarmed at the tip beneath; first ventral segment very slightly depressed in the middle in front.

♀. Rostrum with the apical portion usually much smoother, and the peduncle of the submentum armed with two dentiform prominences—a short one at the base and a longer one in front.

Length 9–12, breadth $3\frac{1}{10}$ – $4\frac{1}{3}$ millim.

Hab. MEXICO (*Truqui*, *Mus. Brit.*), San Andres Tuxtla, Toxpan (*Sallé*), Tapachula (*Höge*); GUATEMALA, Las Mercedes, San Isidro, Zapote, Dueñas (*Champion*).

This is a narrow form of the variable *R. pustulosus*, with the sides of the prothorax more or less parallel at the base and the cinereous spots on the upper surface rather large, these being somewhat crowded on the prothorax (except along the smoother median line) and scattered on the elytra. One of the specimens in the British Museum is labelled *R. adspersus*, but that species has a deep transverse impression on the prothorax. As the present insect has occurred in various localities, especially on the Pacific slope of Guatemala, unaccompanied by *R. pustulosus*, the two forms are here retained as distinct. The sexual characters are similar. The type of *R. varieguttatus* has been communicated by Dr. Sjöstedt for comparison.

32. ***Rhodobænus cinereiventris***, sp. n. (Tab. VI. figg. 34, 34 a, ♂; 35, ♀.)

Elongate, somewhat fusiform, opaque above; black, the prothorax with two broad vittæ on the disc (not reaching the base) and another on each flank, and the elytra each with an Σ -shaped mark on the disc before the middle (partly enclosing a common transverse black patch, which extends forwards along the suture to the base) and various other markings at the base and towards apex, sometimes rufous; the numerous punctures of the upper surface each surrounded by a small, rounded, cinereous spot, the pygidium and under surface with a uniform flavo-cinereous incrustation. Rostrum not longer than the prothorax, strongly arcuate; moderately stout, the short, broad basal portion closely punctate; the apical portion almost smooth, unarmed at the tip beneath in the ♂, much longer in the ♀ and with the peduncle of the submentum in this sex armed with a small tooth in front. Prothorax about as long as broad, subconical, the sides becoming subparallel behind, the base feebly bisinuate; somewhat closely punctate. Scutellum elongate-triangular. Elytra a little wider than the prothorax, oblong, separately rounded at the apex, finely punctate-striate, the interstices each with a row of scattered punctures. Pygidium long, conical, sparsely punctate. Beneath sparsely punctate; first ventral segment shallowly depressed down the middle in the ♂. Femora sparsely fringed with long hairs beneath.

Length 10–11, breadth $3\frac{1}{2}$ – $3\frac{3}{4}$ millim. (♂ ♀.)

Hab. MEXICO, Juquila (*Sallé*: ♂), Misantla, Tapachula (*Höge*: ♂ ♀).

Three males and one female, the latter almost black, the others sharply rufo-maculate above, and with the red markings on the disc of the elytra forming a common incomplete annulus on the disc before the middle. This insect is of much the same shape as *R. varieguttatus*, but the whitish dots on the upper surface are small and somewhat closely placed (especially on the prothorax); the rostrum is smoother in both sexes; and the peduncle of the submentum of the female is dentate at the tip only (as in *R. adspersus* and *R. nigrolineatus*), the rostrum itself being also elongated in this sex.

33. ***Rhodobænus albopunctatus***, sp. n. (Tab. VI. figg. 36, 36 a, ♂.)

Oblong-elliptic, opaque above, black; the prothorax and elytra ferruginous or reddish-brown, the prothorax with a lanciform median vitta, a triangular patch on each side at the base and a spot in front of it on the disc (these sometimes coalescent), and a large patch on the flanks, black; the punctures on the upper surface each surrounded by a rounded white or yellowish-white spot, those on the prothorax somewhat

closely placed, and those on the elytra much larger and arranged in a scattered series along each interstice; the under surface cinereo-pruinose. Rostrum scarcely as long as the prothorax, abruptly and strongly bowed from the broad basal portion, the apical portion sparsely, finely punctate to near the tip, a little smoother in the ♀, the peduncle of the submentum with a small prominence in front in this sex. Prothorax about as long as broad, rounded at the sides anteriorly, feebly bisinuate at the base, somewhat closely punctate. Scutellum oblong-subtriangular. Elytra considerably wider than the prothorax, narrowing from the base, finely punctate-striate, the interstices each with a row of widely scattered punctures, those along the suture more closely placed and with a smaller white dot. Pygidium conical.

Ventral excavation of the ♂ broad. Femora sparsely ciliate beneath.

Length $5\frac{1}{2}$ – $9\frac{3}{4}$, breadth 2 – $3\frac{1}{2}$ millim. (♂ ♀.)

Hab. MEXICO (*Mus. Brit.*), Panistlahuaca in Oaxaca (*Sallé*).

Described from four specimens (three of which are of very small size) in the Sallé collection and two others without definite locality in the British Museum. In this insect the elytra are more or less rufescent and immaculate, and the white spots are small, sharply defined, and somewhat widely scattered; the prothorax is rufous, more or less trivittate with black, and somewhat closely albo-punctate; and the peduncle of the submentum of the female has a very small prominence in front. *R. albopunctatus* is closely related to *R. nigrolineatus*, but it can hardly be treated as a variety of that species.

34. *Rhodobænus unidentatus*, sp. n. (Tab. VII. figg. 1, 1a, ♀.)

Somewhat fusiform, opaque above, black, the elytra and prothorax sometimes indeterminately maculate with rufo-piceous, the punctures above and beneath each surrounded by a rather large pale brownish spot, those on the elytra still larger and widely scattered along each interstice, the punctures of the striae also with a small pallid dot. Rostrum about as long as the prothorax, moderately stout, abruptly incurved from the broad basal portion, the apical portion in the ♂ sparsely punctate at the base and unarmed at the tip beneath, that of the ♀ a little longer and smoother and the peduncle of the submentum in this sex armed with a stout, blunt, downwardly-directed tooth towards the apex. Prothorax about as long as broad, narrowing from near the base, constricted in front, the base feebly bisinuate; sparsely punctate, except along a narrow space down the middle. Scutellum oblong-triangular. Elytra much wider than the prothorax, rapidly narrowing from the rounded humeri, finely punctate-striate, the interstices each with a row of widely scattered punctures. Pygidium conical, pilose at the tip. Ventral excavation of the ♂ shallow, broad. Femora fringed with long hairs beneath.

Length 10 – $11\frac{1}{2}$, breadth 4 – $4\frac{1}{2}$ millim. (♂ ♀.)

Hab. MEXICO, Omilteme and Amula in Guerrero, 6000–8000 feet (*H. H. Smith*).

Three females and one male. This species is characterized by the somewhat conical prothorax; the comparatively broad, subtriangular elytra, with large scattered pale brownish spots; and the stout blunt tooth of the peduncle of the submentum in the female, the basal prominence (conspicuous in *R. pustulosus*, ♀) being altogether wanting in both sexes. The non-excavate prothorax and the large spots on the elytra separate *R. unidentatus* from *R. adspersus*; the stout tooth on the peduncle of the female from the same sex of *R. nigrolineatus*; and the non-incrustate interspaces of the prothorax from *R. guttatus*.

35. *Rhodobæus nigrolineatus*. (Tab. VII. figg. 2, 2 a, ♂.)

Rhodobæus nigrolineatus, Chevr. Ann. Soc. Ent. Fr. 1885, p. 285¹.

Rhodobæus suturellus, Chevr. loc. cit.²

♂. Rostrum scarcely as long as the prothorax, strongly arcuate from the widened, closely punctate, basal portion, the apical portion somewhat closely punctate to near the tip, the peduncle of the submentum unarmed; ventral excavation shallow and rather narrow.

♀. Rostrum similar in length, but with the apical portion very much smoother and the peduncle of the submentum armed with a small dentiform prominence in front.

Length 7-10, breadth $2\frac{1}{2}$ - $3\frac{1}{2}$ millim.

Hab. MEXICO² (*Mus. Brit.*; *Flohr*), Toxpan, Yolos, Tosongo (*Sallé*), Oaxaca¹ (*coll. Chevrolat*), Omilteme, Xucumanatlan (*H. H. Smith*), Juquila (*Sallé, Höge*), Jalapa (*M. Trujillo*), Yucatan (*Mus. Brit.*); GUATEMALA, Senahu, San Juan, Purula, Sabo, and Balheu in Alta Vera Paz, Calderas (*Champion*), Coban (*Conradt*), Trece Aguas (*U.S. Nat. Mus.*).

I have seen the types of *R. nigrolineatus* and *R. suturellus*, Chevr., and am unable to separate them: the first-mentioned is based upon a reddish specimen with a nigro-trivittate prothorax, and the latter upon an example with the brownish-cinereous spots very closely placed along the suture. This species is smaller and narrower than *R. pustulosus*; the prothorax is subconical and relatively narrower; the cinereous dots on the prothorax are somewhat crowded (except along the smoother median line) and comparatively small, those on the elytra being larger, rounded or oblong, and rather widely scattered on the disc, the interspaces sometimes cinereo-nebulose; and the peduncle of the submentum in the female has a small prominence in front only, as in *R. adpersus*. Found in abundance in various places in Alta Vera Paz, as well as in Mexico, the rufo-maculate and nebulose forms being comparatively scarce in the long series before me. The non-excavate disc of the prothorax separates *R. nigrolineatus* from *R. adpersus*, and the unidentate peduncle of the submentum of the female from the same sex of *R. varieguttatus*.

36. *Rhodobæus guttatus*. (Tab. VII. figg. 3, 3 a, ♀.)

Sphenophorus guttatus, Fähr. in Schönh. Gen. Curc. viii. 2, p. 247¹.

Rhodobæus guttatus, Chevr. Ann. Soc. Ent. Fr. 1885, p. 283².

♀. *Sphenophorus adpersus*, Sturm coll. (nec Gyll.)³.

♂. Rostrum sparsely punctate to near the tip, the peduncle of the submentum armed with a short tooth in front; ventral excavation shallow.

♀. Rostrum with the apical portion not so stout, a little longer, and almost smooth, subangulate near the apex beneath, the peduncle with a stout, curved, downwardly-directed, blunt tooth in front.

Hab. MEXICO² (*coll. Sturm*¹³).

We have a pair of this species from the Sturm collection. It is a form of *R. pustulosus* with the head, the base of the rostrum, the prothorax, scutellum, under surface (except along the middle), femora, and tibiæ coated with a uniform flavo-

cinereous incrustation, and the elytral interstices each with a scattered series of large, oval or rounded, whitish spots, those along the suture being smaller and more crowded. The rostrum is abruptly bent inwards from the widened basal portion. The femora are fringed with long hairs beneath in both sexes. The prosternum has two small flattened prominences, separated by a short sulcus, at the base.

37. *Rhodobænus cinctus*. (Tab. VII. figg. 4, 4 a, ♀; 5, 5 a, ♂, 6, 6 a, ♀, vars.)

Sphenophorus cinctus, Gyll. in Schönh. Gen. Curc. iv. p. 921¹ (nec Montr.).

Rhodobænus cinctus, Chevr. Anu. Soc. Ent. Fr. 1885, p. 286².

Sphenophorus cinctus, var. γ. *rubellus*, Gyll. loc. cit.³

Rhodobænus cinctus, var. ε. *obliquus*, Chevr. loc. cit. p. 287⁴.

Rhodobænus cinctus, var. δ. *funerarius*, Chevr. loc. cit. p. 287⁵.

? *Rhodobænus quinquemaculatus*, Chevr. loc. cit. p. 284⁶.

♂. Rostrum about as long as the prethorax, compressed, and feebly curved from the broad, sulcate basal portion, sparsely punctate at the base; first ventral segment broadly flattened or slightly depressed down the middle, without trace of ridge.

♀. Rostrum with the apical portion a little longer and smoother, the peduncle of the submentum usually with a compressed prominence in front.

Hab. MEXICO^{1-4 6}, Durango to Vera Cruz and Chiapas; GUATEMALA; SALVADOR; NICARAGUA; COSTA RICA; PANAMA.—? BRAZIL⁵.

Abundant throughout the warmer parts of Central America, and easily distinguishable, when in fresh condition, by the conspicuous whitish lines on each side of the prothorax and between the black markings on the disc of the elytra (the large, oval, oblique patch near the middle of the suture, and the oblong patches at the base, being thus sharply defined). The black marks near the middle of the suture are often united into a common, large, heart-shaped patch, which usually extends up the suture to the base and is sometimes connected laterally with the humeral spot. The prothorax is nigro-trivittate on the disc, the outer vittæ (sometimes interrupted or reduced to a short streak) being placed at some distance from the margin. The variety *rubellus* (fig. 5) (found in numbers at Zapote, Guatemala) is ferruginous, with the black markings reduced in size and the whitish lines only just traceable. *R. quinquemaculatus*, Chevr. (fig. 6) (the type of which I have seen), seems to be a very dirty, pallid, female example of *R. cinctus*. Some of Biolley's specimens were found on a species of *Vernonia* (order Compositæ) in Costa Rica.

38. *Rhodobænus leucographus*. (Tab. VII. figg. 7, 7 a, ♂.)

Sphenophorus leucographus, Fähr. in Schönh. Gen. Curc. viii. 2, p. 240¹.

Sphenophorus stigma, Sturm, in litt.²

♂. Rostrum about as long as the prothorax, abruptly bowed from the moderately broad basal portion, the apical portion stout and compressed, very sparsely punctate to near the tip, the punctures becoming coarse towards the base; first ventral segment obsoletely depressed down the middle.

♀. Rostrum with the apical portion a little smoother, the peduncle of the submentum with a very small dentiform prominence in front.
Length $6\frac{3}{4}$ – $7\frac{1}{2}$, breadth $2\frac{2}{3}$ – $2\frac{9}{10}$ millim.

Hab. MEXICO^{1 2} (*Mus. Brit.*; *ex coll. Sturm*), Cuernavaca (*H. H. Smith*).

The type of this species, from the "Sommer collection," has been lent us by Mr. Janson. It may be readily known by its purplish colour, the nigro-trivittate prothorax, and the nigro-lineate elytra, the sides of the prothorax and the disc and sides of the elytra ornamented with sharply-defined yellowish-white spots or streaks, those on the disc of the latter clustered into an oblique patch beyond the middle. If I have identified the sexes correctly, there is but little difference in the form of the rostrum in the male and female. *R. leucographus* is not included in Chevrolat's list.

39. ***Rhodobænus rubrovittatus***, sp. n. (Tab. VII. figg. 8, 8 a, ♀; 9, 9 a, ♂, var.)

Rhodobænus rubrovittatus, Deyr. in coll. Sallé¹.

Elongate, narrow, subcylindrical, opaque above, black, the prothorax usually with a stripe along the sides (sometimes extending inwards and leaving the base and a median vitta black, sometimes reduced to a small spot), and the elytra each with a very broad vitta on the outer part of the disc (leaving the suture broadly, and the lower margin very narrowly, black, the sutural stripe often more or less sinuate externally or quadrangularly dilated at about the middle), sanguineous or rufous. Rostrum (♂) gradually curved from the base, moderately stout, shorter than the prothorax, somewhat closely punctate to near the tip, the basal portion broad and narrowly sulcate, (♀) much longer, rather slender, and almost smooth, the peduncle of the submentum armed with a small acute tooth in front in this sex. Prothorax a little longer than broad, subcylindrical, constricted in front, feebly bisinuate at the base; sparsely, very finely punctate. Scutellum long and narrow, shallowly sulcate. Elytra very little wider than the prothorax, long, subparallel, finely punctate-striate. Pygidium long, conical, closely punctate. First ventral segment slightly depressed down the middle in the ♂. Femora fringed with long hairs beneath.

Var. Elytra black, the sixth interstice only with a ferruginous streak, the prothorax with a similarly-coloured broad marginal vitta (in one specimen extending inwards, so as to leave an elongate, basally-dilated stripe, and a small spot on each side of it at about the middle, black). (Fig. 9.)

Length $7\frac{1}{4}$ – $8\frac{1}{2}$, breadth 2– $2\frac{1}{2}$ millim. (♂ ♀.)

Hab. MEXICO (*Mus. Brit.*), Guanajuato, Parada, Juquila, Capulalpam (*Sallé*), Tlapatario (*Höge*); GUATEMALA, Dueñas (*Champion*), Coban (*Conradt*).

Apparently not rare in the Mexican State of Guanajuato. A small, narrow, elongate, parallel-sided form, with a very broad rufous stripe on each elytron, the sides of the prothorax also usually more or less marked with red. The variety with the rufous coloration on the elytra reduced to a narrow streak on the sixth interstice is from Guatemala.

40. ***Rhodobænus sanguineus***. (Tab. VII. figg. 10, 10 a, ♀; 11, ♂.)

Sphenophorus sanguineus, Gyll. in Schönh. Gen. Curc. iv. p. 903¹; viii. 2, p. 240 (excl. var. ♂).

Sphenophorus sanguineus, var. *lineatocollis*, Gyll. loc. cit.³

Rhodobænus sanguineus, Chevr. Ann. Soc. Ent. Fr. 1885, p. 277⁴.

Rhodobænus hæmatidus, Chevr. loc. cit. p. 278⁵.

♂. Rostrum about as long as the prothorax, abruptly deflexed and compressed from the broad, sulcate basal portion, the apical portion obsoletely punctate towards the base; first ventral segment broadly flattened down the middle and with a more or less distinct, short, compressed, cariniform prominence in the centre towards the anterior margin.

♀. Rostrum much longer and with the compressed apical portion almost smooth, the peduncle of the submentum with an angular prominence in front.

Length $6\frac{4}{5}$ – $10\frac{1}{2}$, breadth $2\frac{1}{10}$ – $3\frac{1}{2}$ millim.

Hab. MEXICO¹⁻⁵, Vera Cruz, Guerrero, Guanajuato, Morelos, Oaxaca, &c.; GUATEMALA; NICARAGUA; COSTA RICA.

An abundant insect in Mexico and Guatemala, reaching an elevation of 8000 feet in Guerrero. It may be known by its narrow, subfusiform shape; the basally excavate prothorax; and the rufous colour of the prothorax and the elytra, the former with a narrow median vitta (rarely divided into two spots), and sometimes a spot or streak on the flanks, black, the latter immaculate. *R. hæmatidus* (the type of which I have seen) is based upon freshly emerged specimens with each of the minute punctures bearing a small, hair-like scale. The compressed tubercle on the first ventral segment of the male is usually very conspicuous; but in one or two examples it is apparently wanting, but these individuals may be females with the rostrum not longer than in the male. The numerous specimens of *R. hæmatidus* before me are all from Mexico; the two with the median vitta of the prothorax divided into two spots, and with a rounded spot on the propleura, were found by Mr. Wickham at Toluca.

Some of the typical examples before me are labelled as having been found on *Dahlia* (at Guadalajara), and "corn and beans" (at Quiché).

41. *Rhodobænus bisignatus*, sp. n. (Tab. VII. figg. 12, 12 a, ♂.)

Subfusiform, opaque above, black; the prothorax and elytra rufous, the former with a narrow median vitta and a spot on each flank, and the latter with a spot at the middle of the disc at some distance from the suture, black; the under surface densely cinereo-pruinose. Rostrum not longer than the prothorax, short, abruptly incurved from the broad, punctured, narrowly sulcate basal portion, the apical portion compressed, very sparsely, finely punctate, in the ♀ a little smoother, unarmed at the tip in both sexes. Prothorax subconical, constricted in front, about as long as broad, obsoletely punctate, and with a transverse, areolate depression on the disc towards the base. Elytra much wider than the prothorax, gradually narrowing from the rounded humeri, finely punctate-striate. Pygidium conical. Beneath sparsely, rather coarsely punctate; ventral excavation of the ♂ long and deep, without trace of compressed tubercle anteriorly.

Length 7 – $8\frac{1}{8}$, breadth $2\frac{1}{5}$ – 3 millim. (♂ ♀.)

Hab. MEXICO (*Truqui*), Puebla, Juquila (*Sallé*), Tehuantepec (*Mus. Brit.*).

Five specimens. Very like *R. sanguineus*, but with a shorter and stouter rostrum in both sexes, a black spot on the disc of each elytron near the middle, and a long, deep, non-carinate ventral excavation in the male. It has a similar transverse excavation on the disc of the prothorax, a character separating *R. bisignatus* from all the varieties of *R. 13-punctatus*. *R. bipunctatus*, Chev., from Brazil, has somewhat similarly marked elytra.

42. *Rhodobænus ypsilon*. (Tab. VII. figg. 13, 13 a, ♂.)

Rhodobænus ypsilon, Chevr. Ann. Soc. Ent. Fr. 1885, p. 280¹.

♂. Rostrum about as long as the prothorax, abruptly deflexed from the broad, coarsely punctate, basal portion, the apical portion compressed and punctured to near the tip; first ventral segment slightly depressed in the middle at the base.

♀. Rostrum with the apical portion longer and almost smooth, the peduncle of the submentum with a small compressed prominence in front.

Length $5\frac{1}{2}$ –9, breadth $1\frac{1}{2}$ –3 millim.

Hab. MEXICO¹ (*Mus. Brit.*), San Andres Tuxtla, Toxpam, Juquila (*Sallé*), Cordova (*U.S. Nat. Mus.*), Oaxaca, Tapachula (*Höge*); GUATEMALA, San Juan and San Gerónimo in Vera Paz, Cerro Zunil, Zapote (*Champion*); NICARAGUA, Chontales (*Richardson*); COSTA RICA (*coll. Sharp*), Tucurrique (*U.S. Nat. Mus.*); PANAMA, Volcan de Chiriqui, Tolé (*Champion*).

Numerous examples. A small, narrow, elongate form, ferruginous, variegated with black—the black markings on the prothorax condensed into three vittæ (the outer two marginal), and those on the elytra into a narrow sutural streak, a more or less interrupted oblique stripe on the disc (extending from below the shoulder to the middle of the suture, and sometimes reduced to two spots), a common oblong patch on the suture at the apex, and a longer one along the sides posteriorly; the prothorax longer than broad, sparsely punctate, and with a transverse, arcuate depression on the disc towards the base, which is limited on each side by an oblique, cinereo-pruinose streak and sometimes preceded by four transversely placed small cinereous spots; the elytra comparatively short and very little wider than the prothorax; the scutellum narrow; the rostrum (viewed in profile) subdentate at the base on each side, and somewhat abruptly separated from the head; the antennal scape nearly twice as long as the funiculus. A male from San Gerónimo is figured.

43. *Rhodobænus cariniventris*, sp. n. (Tab. VII. figg. 14, 14 a, b, ♂.)

Somewhat fusiform, opaque above, pruinose beneath, ferruginous, the prothorax with five vittæ (one down the middle, one along each outer margin, and one along the lower part of the flanks), the elytra with two interrupted oblique fasciæ (one extending from a little below the shoulder to the middle of the suture, the other subapical, and each formed by two or three spots, which are sometimes coalescent) and a short streak at the base of the suture, and the metasternum and abdomen in part, black; the fine scattered punctures (in fresh specimens) surrounded by a whitish dot. Rostrum about as long as the prothorax, abruptly deflexed from the broad, narrowly sulcate basal portion, the apical portion compressed, sparsely punctured at its base in the ♂, smooth throughout and slightly longer in the ♀, the peduncle of the submentum with a very small prominence in front in both sexes. Prothorax about as long as broad, obliquely narrowed in front, bisinuate at the base, transversely excavate on the disc posteriorly, very sparsely, finely punctate. Scutellum elongate-triangular. Elytra a little wider than the prothorax, finely punctate-striate, the interstices each with a row of very fine scattered punctures. Pygidium conical. Beneath very sparsely, finely punctate; first ventral segment of the ♂ broadly depressed and with a short, conspicuous, cariniform prominence in the middle (fig. 14 b), this being just traceable in the ♀.

Length $8\frac{1}{2}$ –10 $\frac{2}{3}$, breadth 3–3 $\frac{2}{3}$ millim. (♂ ♀.)

Hab. MEXICO, San Andres Tuxtla, Juquila (*Sallé*), Cerro de Palmas (*Höge*); GUATEMALA (*Mus. Brit.*), Zapote, San Gerónimo (*Champion*).

Eleven specimens, five of which are from Zapote. Distinguishable from the reddish variety of *R. cinctus*, and from other allied forms, by the conspicuous cariniform tubercle on the first ventral segment of the male, a character also to be found in the same sex of *R. bicinctus* and *R. maculifer*.

The vars. α and β of *R. deltoides* have very similarly marked elytra, but they want the ventral tubercle in the male.

44. *Rhodobænus bicinctus*. (Tab. VII. figg. 15, 15 α , σ .)

Rhodobænus bicinctus, Chevr. Ann. Soc. Ent. Fr. 1885, p. 282¹.

σ . Rostrum a little longer than the prothorax, abruptly deflexed from the broad basal portion, the apical portion compressed and almost smooth; first ventral segment shallowly depressed down the middle, and usually with a more or less distinct, short, longitudinal plica towards the anterior margin.

φ . Rostrum with the apical portion longer and smoother, the peduncle of the submentum with a compressed dentiform prominence in front.

Var. σ . The median fascia of the elytra reduced to a common transverse patch (which extends forwards along the suture to the base) and a spot on the outer margin, the apical third black; first ventral segment with a short plica.—Colombia.

Sphenophorus deliciosus, Jckel, in *Mus. Brit.*

Length $6\frac{1}{2}$ – $10\frac{1}{4}$, breadth $2\frac{1}{10}$ – $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Cerro Zunil, Capetillo, Dueñas (*Champion*); COSTA RICA (*Van Patten*), Irazu (*Rogers*), Rancho Redondo, Volcan de Barba, El Tablazo (*Biolley*), Carrillo (*Underwood*).—COLOMBIA (*Mus. Brit.*: var.), Rio Magdalena¹; VENEZUELA (*Mus. Brit.*).

Near *R. ypsilon*; ferruginous variegated with black—the black markings on the prothorax condensed into three vittæ (which are frequently connected along the basal margin, the marginal one sometimes interrupted and often invisible from above), and those on the elytra into two common transverse fasciæ (the submedian one sometimes widened inwards and extending up the suture to the base, and sometimes divided into two spots, the subapical one arcuate) and a subhumeral spot; the prothorax transversely excavate posteriorly, smoother and a little less elongate than in *R. ypsilon*, without densely pruinose streaks and spots; the pygidium pilose at the tip; the rostrum longer and smoother, and less abruptly separated from the head. The four specimens from Venezuela and the variety from Colombia doubtless belong to the same species; they have a short sharply-defined plica on the first ventral segment in the male. Some of Biolley's Costa Rican examples, from one of which our figure is taken, are labelled as having been found on *Labiata*.

45. **Rhodobænus deltoides.** (Tab. VII. figg. 16, 16 a, ♀.)

Sphenophorus sanguineus, Gyll., var. ♂, in Schönh. Gen. Curc. viii. 2, p. 240¹.

Rhodobænus deltoides, Chevr. Ann. Soc. Ent. Fr. 1885, p. 279².

Rhodobænus implicatus, Chevr. loc. cit. (nec Gyll.)³.

♂. Rostrum about as long as, or slightly longer than, the prothorax, abruptly deflexed and very little curved from the broad basal portion, the apical portion stout, compressed, sparsely punctate towards the base; first ventral segment slightly depressed down the middle.

♀. Rostrum with the apical portion considerably longer and almost smooth, the peduncle of the submentum with a compressed angular prominence in front.

Var. α. The humeral patch of the elytra obliquely coalescent with the dilated portion of the sutural stripe.

Var. β. The sutural stripe of the elytra reduced to a narrow streak at the base and an oblong spot on each side of the suture, and the dilated portion into two spots.

Length 7-9 $\frac{3}{4}$, breadth 2 $\frac{1}{2}$ -3 $\frac{1}{2}$ millim.

Hab. MEXICO ¹⁻³ (*Flohr, Truqui, Mus. Brit.*), Vera Cruz, Toxpam, Playa Vicente, Cuernavaca, Yolos (*Sallé*), Jalapa, Juquila, Tapachula (*Höge*), Santa Lucrecia, Almoloya (*Knab, in U.S. Nat. Mus.*); BRITISH HONDURAS (*Blancaneaux*); GUATEMALA, Zapote (*Champion*), Trece Aguas (*U.S. Nat. Mus.*); NICARAGUA, Chontales (*Belt*); COSTA RICA (*coll. Fry*).

Sent in numbers from Tapachula, on the Pacific slope of Southern Mexico. Amongst the numerous ferruginous, nigro-maculate forms, the present species may be distinguished by the excavate disc of the prothorax and the general arrangement of the black markings—those on the prothorax condensed into three vittæ (one down the middle and one along each outer margin, these latter sometimes abbreviated anteriorly or reduced to a short streak or spot), and those on the elytra into a broad, submesially dilated, sutural stripe (which is frequently interrupted beyond the middle), a subhumeral spot, and a common, curved, apical or subapical fascia, which extends forwards along the sides to about the basal third. The sutural stripe in some specimens is sometimes reduced to a short streak at the base and an oblong spot on each side of the suture before the middle, in others it is more extended and obliquely confluent with the subhumeral spot.

46. **Rhodobænus nigropictus**, sp. n. (Tab. VII. figg. 17, 17 a, ♂.)

Subfusiform, moderately elongate, opaque above, black; the prothorax and elytra rufous, the former with a lanciform median vitta, a triangular patch on each side at the base, and a large space on the flanks, and the latter with a triangular scutellar patch, a spot on the shoulder, an oblique, oval or rounded, patch near the suture before the middle and a spot in a line with it on the outer margin (these markings sometimes coalescent), and an angulate apical fascia (sometimes reduced to one or two oblong spots on each elytron), black; the punctures each indicated by a faint whitish dot, the under surface densely cinereo-pruinose. Rostrum not longer than the prothorax, strongly, abruptly incurved from the broad, sulcate, coarsely punctate basal portion, the apical portion becoming much thicker towards the base, and smooth, bare, and shining towards the tip, the smoother portion in the ♀ slightly longer, without prominence at the apex beneath. Antennal scape and funiculus subequal in length. Prothorax subconical, about as long as broad, very feebly bisinuate at the base, finely punctate, flattened on the disc posteriorly. Scutellum long

and narrow. Elytra a little wider than the prothorax, finely punctate-striate, the interstices uniseriate-punctate. Pygidium conical. Beneath somewhat closely punctured; first ventral segment slightly depressed down the middle in the ♂. Femora sparsely fringed with short hairs beneath.

Length $6-7\frac{1}{4}$, breadth $2-2\frac{1}{2}$ millim. (♂ ♀.)

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

Six examples. A small species near *R. bicinctus*, but differently marked above, the rostrum shorter, more curved, and much thickened towards the base, the ventral depression of the male indistinct and without trace of carina. The two triangular marks at the base of the prothorax and the one on the scutellar region together form a v-shaped patch. The sexes, if rightly identified, are very similar.

47. *Rhodobænus pantherinus*, sp. n. (Tab. VII. figg. 18, 18 a, ♂.)

Moderately elongate, subelliptic, opaque above, shining beneath; ferruginous or sanguineous, the prothorax with two spots along the middle of the disc (sometimes united into an incomplete vitta or the posterior one wanting) and two others along the sides, and the elytra with a transverse or oblique patch on the outer part of the disc below the base, a scutellar patch, a spot near the middle of the suture (sometimes coalescent with the one on the opposite elytron and extending up the suture to the scutellar patch), a smaller spot in a line with it on the outer margin, and a common, angulate, oblique, subapical fascia, black, the metathoracic episterna, a spot on the lower part of the propleura, the knees, and antennæ also black or piceous; the under surface cinereo-pruinose. Rostrum stout, about as long as the prothorax, abruptly deflexed and arcuate from the broad basal portion, the apical portion sparsely punctate at the base, in the ♀ a little longer and smooth throughout, the peduncle of the submentum with a small dentiform prominence in front in this sex. Prothorax nearly as long as broad, rounded at the sides anteriorly, constricted in front, very sparsely, obsoletely punctate, the disc with a conspicuous transverse, arcuate, depression towards the base. Elytra much wider than the prothorax, finely punctate-striate. Beneath very sparsely, finely punctate; first ventral segment broadly flattened or depressed down the middle anteriorly.

Length $9-12\frac{1}{8}$, breadth $3\frac{1}{2}-4\frac{1}{2}$ millim. (♂ ♀.)

Hab. MEXICO (*Flohr*), San Andres Tuxtla (*Sallé*), Cordova (*Knab*, in *U.S. Nat. Mus.*), Tapachula (*Höge*); GUATEMALA (*Mus. Brit.*), Purula, Sabo, San Juan, and San Gerónimo in Vera Paz, El Reposo, Cerro Zunil, Zapote (*Champion*), Escuintla (*Knab*, in *U.S. Nat. Mus.*); COSTA RICA, Azahar de Cartago (*Underwood*), San José, Tarbaca (*Biolley*).

This is a rather large, red-legged, ferruginous form of *R. 13-punctatus*, with sharply defined black spots on both the prothorax and elytra, and a conspicuous, transverse, arcuate depression on the disc of the former towards the base. The twenty-three specimens seen vary but little *inter se*, and amongst the very long series of *R. 13-punctatus* before me there is nothing intermediate. The present insect cannot be referred to any of the forms named by Chevrolat.

48. *Rhodobænus maculipes*, sp. n. (Tab. VII. figg. 19, 19 a, ♀.)

Moderately elongate, subfusiform, opaque above, ferruginous, variegated with black, the black markings on the upper surface condensed into a spot on the head, a lanciform median vitta and two spots on each side of the prothorax, and five large spots on each elytron—one, curved and oblique, below the

shoulder, extending inwards to the fourth stria, one, subtriangular and oblique, near the suture just before the middle, one, smaller, triangular, in a line with it on the outer margin, one, oblique, midway between the latter and the apex, and one, oblong, along the suture (in one specimen coalescent with the corresponding spot on the opposite elytron) at the apex; the femora and tibiae ferruginous, the former with a black spot towards the apex; the under surface in great part black, rufo-maculate along the sides, cinereo-pruinose. Rostrum moderately stout, about as long as the prothorax, curved and compressed from the broad, narrowly sulcate basal portion, opaque, obsoletely punctate, in the ♀ much longer, unarmed at the tip beneath in both sexes. Prothorax subconical, about as long as broad, flattened on the disc posteriorly, sparsely, finely punctate. Scutellum oblong-subtriangular. Elytra considerably wider than the prothorax, gradually narrowing from the base, separately rounded at the apex; finely punctate-striate. Pygidium conical, sparsely punctate, setulose. Beneath very sparsely, finely punctate; first ventral segment unimpressed.

Length $9\frac{2}{3}$ –10, breadth $3\frac{1}{2}$ millim. (♂ ♀.)

Hab. GUATEMALA, near the city 5000 feet (*Salvin*).

One pair, the female with the curved streak below the base showing a tendency to join a narrow, oblique, faint, additional spot near the scutellum, and the oblong apical patch coalescent with the one on the opposite elytron. Very near *R. pantherinus*, but with the apical portion of the rostrum duller and more compressed, the prothorax subconical and unimpressed, the elytral markings differently arranged (the common oblong apical patch being completely disconnected from the third spot), and the femora spotted with black. Amongst the varieties of *R. pulchellus* and *R. 13-punctatus* there are none with the elytra marked as in the present insect.

49. *Rhodobænus pulchellus*. (Tab. VII. figg. 20, 20 a, ♀.)

Sphenophorus pulchellus, Gyll. in Schönh. Gen. Curc. iv. p. 898¹; viii. 2, p. 239² [nec *S. pulchellus*, Riley, Ins. Missouri, iii. p. 60, fig. 23 (1871)].

Rhodobænus pulchellus, Chevr. Ann. Soc. Ent. Fr. 1885, p. 276³.

Rhodobænus 13-punctatus, Ill., var. *β. 12-maculatus*, Chevr. loc. cit. pp. 275, 276⁴.

Rhodobænus 13-punctatus, Ill., var. *γ. metropolitanus*, Chevr. loc. cit. pp. 275, 277⁵.

♂. Rostrum barely as long as the prothorax, arcuate from the broad, narrowly sulcate basal portion, punctured to about the middle; first ventral segment very slightly depressed down the centre.

♀. Rostrum with the apical portion longer and almost smooth; the peduncle of the submentum with a dentiform prominence in front.

Var. *niger*, n. Entirely black.

Length $8\frac{1}{4}$ – $10\frac{1}{5}$, breadth $2\frac{3}{4}$ – $3\frac{1}{2}$ millim.

Hab. MEXICO¹⁻⁴ (*Mus. Brit.*), Sierra Madre de Tepic (*Richardson*), Toxpam, Capulalpam, Parada (*Sallé*), Oaxaca (*Sallé*, *Höge*), Misantla, Cerro de Palmas (*Höge*), Temax in N. Yucatan (*Gaumer*: var.); GUATEMALA^{4 5} (*Mus. Brit.*), Purula, San Gerónimo (*Champion*), Coban (*Conradt*: var.); COSTA RICA (*Van Patten*: typical form and var.).

The long series of this insect before me, mainly from San Gerónimo, Misantla, and Temax, divide up into two sharply contrasted forms—one rufous and nigro-maculate above, the other wholly black. *R. pulchellus* is doubtless yet another phase of

R. 13-punctatus, but as the typical maculate form of it shows little sign of variation, the two are perhaps best treated as distinct: it is a little more elongate, the prothorax is subquadrate, and the elytra are less widened anteriorly and subparallel in their basal half; the prothorax, in the typical form, has a lanciform median vitta (sometimes reduced to a rounded spot) and two spots on each side near the outer margin, and the elytra a scutellar patch, a common, transverse, larger patch before the middle (sometimes reduced to two spots, and sometimes continued along the suture to the base), a broad, common, transverse, anteriorly angulate, subapical fascia, and two spots along the sides, black. The wholly black form has been sent in abundance from Yucatan. I have seen the types of Gyllenhal's *S. pulchellus* and of Chevrolat's *R. 12-maculatus*.

50. Rhodobænus 13-punctatus. (Tab. VII. figg. 21–30.)

Curculio 13-punctatus, Illiger, in Schneider's Mag. v. p. 613 (1791) ¹.

Rhynchophorus 13-punctatus, Herbst, Käf. vi. p. 10, t. 60. fig. 5 ².

Calandra 13-punctata, Say, Amer. Ent. t. 9. figg. 3, 4 ³; ed. Leconte, i. pp. 18, 19, t. 9. figg. 3, 4 (1824) ⁴.

Sphenophorus 13-punctatus, Gyll. in Schönh. Gen. Curc. iv. p. 898 ⁵; viii. 2, p. 239 ⁶; Horn, Proc. Am. Phil. Soc. xiii. p. 414 ⁷ (excl. syn. *S. anceps*, Gyll.).

Rhodobænus 13-punctatus, Lec. Proc. Am. Phil. Soc. xv. p. 332 ⁸; Chevr. Ann. Soc. Ent. Fr. 1885, p. 275 ⁹ (excl. vars. *12-maculatus* and *metropolitanus*).

Curculio cribrarius, Fabr. Ent. Syst. Suppl. v. p. 165 ¹⁰.

Calandra cribraria, Fabr. Syst. Eleuth. ii. p. 434 ¹¹; Oliv. Ent. v. no. 83, p. 88, t. 23. figg. 412 a, b ¹².

Curculio 14-punctatus, Panz. ed. Voet, iv. p. 54, t. 37. fig. 18 (1798) ¹³.

? *Curculio leptocerus*, Panz. loc. cit. p. 57, t. 37. fig. 23 ¹⁴.

? *Curculio obscurus*, Voet, Cat. Syst. Col. ii. p. 50, t. 37. fig. 23 (1806) ¹⁵.

Calandra 5-punctata, Say, Amer. Ent. t. 9. fig. 2 ¹⁶; ed. Leconte, i. p. 19, t. 9. fig. 2 ¹⁷.

Rhodobænus 5-punctatus, Chevr. Ann. Soc. Ent. Fr. 1885, p. 278 ¹⁸.

Sphenophorus variabilis, Gyll. in Schönh. Gen. Curc. iv. p. 899 ¹⁹; viii. 2, p. 239 ²⁰.

Sphenophorus implicatus, Gyll. loc. cit. p. 901 ²¹.

Sphenophorus variabilis, var. *implicatus*, Gyll. op. cit. viii. 2, p. 240 ²².

Sphenophorus lebasii, Gyll. loc. cit. p. 902 ²³.

Sphenophorus variabilis, var. *lebasii*, Gyll. op. cit. viii. 2, p. 239 ²⁴.

Rhodobænus lebasi, Chevr. loc. cit. p. 282 ²⁵.

Sphenophorus pulchellus, Riley, Ins. Missouri, iii. p. 60. fig. 23 (1871) (nec Gyll.) ²⁶.

Rhodobænus femoralis, Chevr. loc. cit. p. 277 ²⁷.

Rhodobænus auctus, Chevr. loc. cit. p. 278 ²⁸.

Rhodobænus elegans, Chevr. loc. cit. p. 278 ²⁹.

Rhodobænus corniculatus, Chevr. loc. cit. p. 280 ³⁰.

Hab. NORTH AMERICA ^{1–23} ²⁶, United States generally.—MEXICO ⁷ ⁸ ^{27–30}; BRITISH HONDURAS; GUATEMALA; NICARAGUA; COSTA RICA; PANAMA.—COLOMBIA ^{23–25}.

A polymorphic insect and very abundant throughout the United States and Central America, often occurring gregariously on the flowers of various trees and shrubs. The sexual characters are similar to those of *R. pulchellus*. The numerous forms described by Chevrolat (the types of which I have seen) are connected by intermediate examples and they cannot be maintained as distinct; he, apparently, was unacquainted with the wholly black variety. It may be observed that the two black spots along the sides of the prothorax are always placed at some distance inwards from the margin and are never longitudinally confluent, and that the disc is without definite transverse impression, characters separating *R. 13-punctatus*, in all its varieties, from *R. deltoides*, *R. cariniventris*, &c. The var. *femoralis*, abundant in Mexico and Guatemala, is one of the most striking forms. Say states that the present species is found on the wild cotton or milkweed (*Asclepias* sp.); and Riley²⁶ says that he has bred it from the "cocklebur."

For convenience of reference, the various forms may be grouped under sixteen headings, thus:—

1. Rufous above, the prothorax with five, and each elytron with four, spots; legs black. [*R. 13-punctatus*, auct.]—United States, ? N. Mexico.
2. As in 1, but with the two subapical spots on the elytra united into a common, large transverse patch, and the two near the middle of the suture also more or less coalescent. [*R. pulchellus*, Riley, nec Gyll.] (Figg. 21, 21 a, ♀.)—United States, Mexico (Coahuila).
3. As in 1, but with the subapical markings on the elytra obliterated and the other three spots (the one near the middle of the suture usually excepted) small or inconspicuous. [*R. elegans*, Chevr.] (Figg. 22, 22 a, ♂.)—Mexico, Guatemala, Costa Rica.
4. As in 1, but with the two spots near the middle of the elytra coalescent, often extending along the suture to the base or connected posteriorly with the common (subconical, oblong, or transverse) subapical patch. [*R. corniculatus*, Chevr.; *interpunctatus*, Sallé coll.] (Fig. 23.)—Mexico, Guatemala.
5. As in 4, but with the black markings larger, those on the elytra sometimes coalescent or condensed behind into a curved subapical fascia. [*R. graphicus*, Dugès, in litt.; *venustus*, Mus. Brit.] (Fig. 24.)—Mexico, Costa Rica.
6. As in 4, but with the femora and tibiae partly red.—Mexico.
7. As in 5, but with the black markings at the base of the prothorax coalescent. [*R. implicatus*, Gyll.*, nec Chevr.]—Mexico, Costa Rica.
8. As in 4, but with the ferruginous markings on each elytron reduced to a posteriorly abbreviated median vitta. [*R. vittatipennis*, var. n.] (Fig. 25.)—Panama.
9. As in 5, but with the black markings on the elytra condensed into a very large, elongate-subtriangular, common patch extending from a little below the scutellum to the apex and

* The "type" of this insect communicated by Dr. Sjöstedt is evidently *R. saucius*, Gyll.; it bears no locality-label. *R. implicatus*, Chevr. = *R. deltoides*, Chevr.

bordered externally by two rather large spots; the surface somewhat coarsely punctate. [*R. triangularis*, var. n.] (Fig. 26.)—Mexico.

10. Rufous above, the prothorax with an attenuate median vitta and two small spots on each side near the outer margin, and the elytra with a very large, elongate-subtriangular, common patch extending from a little below the scutellum to the apex, and sometimes a small spot exterior to it, black. [*R. lebasii*, Gyll.]—Mexico, Colombia.
11. As in 10, but with the femora to near the tip and the tibiæ in part rufous. [*R. femoralis*, Chev.; *venustus*, Sallé coll.] (Fig. 27.)—Mexico, Panama.
12. Prothorax rufous above, with a median vitta, and two spots on each side near the outer margin, black; the elytra black, with the outer margin narrowly rufescent, at least towards the base. [*R. 5-punctatus*, Say.]—United States, Mexico, Guatemala.
13. As in 12, but with the black markings at the base of the prothorax coalescent. [*R. auctus*, Chev.] (Fig. 28.)—Mexico, Panama.
14. Prothorax rufous, with three or five spots on the disc (the basal two large), and one on each flank, black; the elytra wholly black. [*R. thoracicus*, Chev.*; *sanguinicollis*, Sallé coll.] (Fig. 29.)—Mexico, Guatemala, Nicaragua.
15. Prothorax ferruginous, with a narrow median vitta (rarely obsolete), two spots at the base, and sometimes another small spot on each side about the middle, black; the elytra black, rarely with a faint sinuous reddish stripe down the middle of the disc; the femora sometimes in part ferruginous. [*R. nigripennis*, var. n.] (Fig. 30.)—Mexico, Guatemala.
16. Wholly black. [*R. immaculatus*, var. n.]—Yucatan, Chiapas, Panama.

51. *Rhodobænus rubicundus*, sp. n. (Tab. VII. figg. 31, 31 *a*, ♂.)

Fusiform, moderately elongate, opaque above, ferruginous, faintly pruinose, the punctures filled with a pale brownish incrustation; the prothorax with three narrow incomplete vittæ (one at the middle, and one on each flank) and a short streak or spot on each side of the disc near the base, the elytra with a narrow, oblique, complete or interrupted, fascia extending from a little below the shoulder to about the middle of the second stria, and the posterior femora sometimes with a space on the inner face towards the apex, black. Rostrum strongly arcuate, about as long as the prothorax, stout, finely punctate, smooth at the tip, the basal portion moderately broad, the peduncle of the submentum with a small prominence in front. Eyes narrow, strongly transverse. Prothorax as long as broad, conical, feebly constricted in front, bisinuate at the base, transversely depressed on the disc posteriorly; impressed with fine scattered punctures, each of which is surrounded by a transverse or rounded brownish dot. Scutellum long, narrow. Elytra much wider than the prothorax, subtriangular, finely striate, the striæ with fine, distantly-placed punctures, the interstices flat, obsoletely uniseriate-punctate. Pygidium sparsely punctate. Under surface rather coarsely punctured; ventral depression of the ♂ extending forwards. Legs comparatively elongate, the posterior femora reaching beyond the tip of the pygidium, all of them with scattered clubbed hairs beneath.

Length $7\frac{1}{2}$ –9, breadth $3\frac{1}{10}$ – $3\frac{2}{5}$ millim. (♂ ♀.)

Hab. COSTA RICA, La Palma (*Biolley*), Carrillo (*Underwood*); PANAMA, Volcan de Chiriqui (*Champion*).

Three specimens. An isolated form, ferruginous in colour, with a conical, nigro-lineate prothorax, triangular, obliquely unifasciate elytra, and unusually long hind legs. The eyes vary in size.

* Ann. Soc. Ent. Fr. 1885, p. 276.

SCYPHOPHORUS.

Scyphophorus, Schönherr, Gen. Curc. iv. p. 855 (1838); Lacordaire, Gen. Col. vii. p. 294; Horn, Proc. Am. Phil. Soc. xiii. p. 409 (1873); Leconte, op. cit. xv. p. 331.

A genus easily separable from the rest of the American Sphenophorina by the flattened, spongy, apical portion of the antennal club. I follow Leconte in reducing the number of so-called species to two, *S. acupunctatus*, Gyll., and *S. yuccæ*, Horn*. These insects attack Amaryllideæ and Liliaceæ (*Agave*, *Furcraea*, and *Yucca*).

1. *Scyphophorus acupunctatus*. (Tab. VII. figg. 32, 32 a, ♂.)

Scyphophorus acupunctatus, Gyll. in Schönh. Gen. Curc. iv. p. 857¹; Horn, Proc. Am. Phil. Soc. xiii. p. 409²; Lec. op. cit. xv. p. 331³; Dugès, La Nature, v. p. 124, t. 3. figg. 6, 6 a-j (1881)⁴; Chevr. Ann. Soc. Ent. Fr. 1882, p. 577⁵; Dugès, Ann. Soc. Ent. Belg. xxx. p. 33, t. 2. figg. 11-16 (1886)⁶.

Scyphophorus interstitialis, Gyll. loc. cit. p. 856⁷.

Scyphophorus anthracinus, Gyll. loc. cit. p. 858⁸.

Rhynchophorus asperulus, Lec. Pacif. R. Rep. 1857, p. 58⁹.

Scyphophorus robustior, Horn, loc. cit. p. 409¹⁰.

Hab. NORTH AMERICA, Colorado³, California^{3,9}, New Mexico, Arizona, Texas³.—MEXICO^{1-6,8}; BRITISH HONDURAS; GUATEMALA; SALVADOR; COSTA RICA.—VENEZUELA, Caracas⁸; CUBA⁵; HAITI^{5,7}.

An abundant insect in our region, varying greatly in size, in the shape and puncturing of the prothorax, and in the sculpture of the elytra, the interstices being flat in some examples and convex in others. The male has the first ventral segment and the adjacent portion of the metasternum broadly depressed down the middle. The female has the prothorax less rounded at the sides, the rostrum smoother, more slender, and cylindrical to the tip, and the femora and tibiæ clothed with shorter hairs than in the male. Dugès⁴ has described and figured the larva and pupa of *S. acupunctatus*, and he gives the food-plant as *Agave mexicana* and *A. cubensis*. Some of Biolley's Costa Rican examples are labelled as having been found in *Agave americana* and *Furcraea tuberosa*. Leconte³ states that it lives on *Yucca*. One specimen in the British Museum is ticketed "bred in greenhouse, Windsor, 1891." The length varies from 10-19 mm.

A male from Oaxaca with a strongly developed prothorax is figured.

SPHENOPHORUS.

Sphenophorus, Schönherr, Gen. Curc. iv. p. 874 (1838) (part.); Lacordaire, Gen. Col. vii. p. 295 (part.); Horn, Proc. Am. Phil. Soc. xiii. p. 411 (exclud. Group II.); Leconte, op. cit. xv. p. 331; Chittenden, Proc. Ent. Soc. Wash. vi. p. 128 (1904), and vii. pp. 50, 166 (1905).

* We are indebted to Mr. Wickham and Prof. Chittenden for specimens of this Californian insect. It feeds on *Yucca gloriosa*.

This cosmopolitan genus, as at present restricted, may be said to have its headquarters in the United States, to judge from the numerous forms added during recent years; and a considerable number are also found in Mexico, one only of these latter (*S. incurrens*) being known as yet to extend southward through Central America. In Tropical South America and the Antilles, *Sphenophorus* seems to be replaced to a certain extent by *Merothricus*, Chevr. (type, *S. rusticus*, Gyll.), the species of which have a rather longer, subconical antennal club. Three of the Mexican forms here referred to the present genus (*S. aterrimus*, *S. mundus*, and *S. octocostatus*) have a broad spongy-pubescent third tarsal joint, but they are so obviously related to *S. æqualis*, Gyll., that they must be placed near that insect. Most of them are very variable, as regards the sculpture and incrustation of the surface, there being opaque and shining forms of some of the species, and in consequence they are often difficult to define; good characters, however, are often to be found in the males.

Prof. F. H. Chittenden has very kindly presented us with named examples of fifty N.-American species (including many of his own co-types), for comparison with the Mexican forms, the types of nearly all of which I have seen; but even with this abundance of named material I am unable to arrive at a positive conclusion as regards the true limits of such species as *S. reticulaticollis*, *S. sulcifrons*, and others. Horn's Section B of his Group V. (including insects with the anterior tibiæ toothed or angulate at the middle) is not represented in our region, and his Group II. has already been dealt with under *Cactophagus* and *Rhodobænus*.

Many of these insects are destructive to the roots of maize, both in the larval and adult stages (*S. zeæ*, *S. maidis*, &c.), or attack *Pontederia cordata** (*S. pontederiæ*), *Cyperus esculentus** (*S. destructor*), grasses, like *Distichlidis spicata* (*S. distichlidis*), &c.

The subjoined Table will assist in the identification of the forms enumerated in the following pages:—

- | | |
|--|---|
| <i>a.</i> Third joint of each tarsus large, broad, and spongy-pubescent (except along a very narrow median line) beneath, in both sexes; rostrum subcylindrical. | |
| <i>a</i> ¹ . | Upper surface bare and opaque, the prothorax at most feebly punctate, the elytral interstices flat. |
| <i>a</i> ² . | Elytral striæ obsoletely punctate <i>aterrimus</i> , sp. n. |
| <i>b</i> ² . | Elytral striæ conspicuously punctate <i>mundus</i> , sp. n. |
| <i>b</i> ¹ . | Upper surface uneven, the punctures and depressions filled with a dense incrustation; prothorax very coarsely unequally punctate and with a smooth, broad median ridge; elytra each with four broad costæ, the suture also raised and bare <i>octocostatus</i> , sp. n. |

* A plant found throughout our region (cf. Biol. Centr.-Amer., Botany, iii. pp. 383, 446).

- b.* Third joint of each tarsus moderately broad, and with a densely pubescent space on each side beneath, in both sexes.
- c*¹. Upper surface covered with a thin, natural, shining, incrustation; prothorax with three broad longitudinal ridges; rostrum compressed *ochreus*, Lec.
- d*¹. Upper surface uneven, the foveiform depressions densely incrustate; the prothorax flattened, the elytral striæ and interstices similarly punctate; rostrum subcylindrical *multipunctatus*, sp. n.
- c.* Third joint of anterior tarsi of ♂ more or less widened and with a space on each side densely pilose beneath, that of the ♀ narrower.
- e*¹. Prothorax with an abbreviated lanciform median ridge, and a sinuous ridge on each side of it, bare and shining, the third elytral interstice also raised anteriorly, the depressions of the surface incrustate *cariosus*, Oliv.
- f*¹. Prothorax with a more or less conspicuous V-shaped area at the base, and a narrow, oblong, flattened space or depression in front, coarsely punctate; elytra with large, oval or horseshoe-shaped, foveæ placed along the narrow striæ, the foveæ often incrustate; anterior tibiæ slightly produced at the outer apical angle . . . *cicatistriatus*, Fähr.
- d.* Third joint of each tarsus narrow, subconical, laterally pilose, at most very slightly widened in ♂.
- g*¹. Rostrum compressed, stout.
- c*². Prothorax coarsely, densely punctate, with a smoother Y-shaped median ridge and an oblique ridge on each side of it, the elytra also with a spot on the shoulder and another near the apex bare, the rest of the upper surface incrustate.
- a*³. Incrustation moderately dense; first ventral segment of ♂ deeply excavate *reticulaticollis*, Boh.
- b*³. Incrustation (in fresh specimens) denser, felt-like; first ventral segment of ♂ slightly depressed *hoegbergi*, Boh.
- d*². Prothorax densely punctate, except along a smooth, narrow, raised median line, and with a V-shaped depressed area at the base: upper surface incrustate.
- c*³. Elytra coarsely punctate-striate; rostrum feebly sulcate at the base: species larger and broader *terricola*, sp. n.
- d*³. Elytra very finely punctate-striate; rostrum deeply sulcate at the base: species narrower and smaller *cæsifrons*, Chevr.
- e*². Prothorax densely, coarsely, confluent punctate, except along the narrow raised median line; elytra with rather coarse scattered punctures along the striæ; rostrum deeply sulcate at the base: upper surface incrustate *lutulentus*, sp. n.
- f*². Prothorax rather sparsely, unequally punctate, almost even; elytra with coarse scattered punctures along the striæ, the interstices somewhat coarsely uniseriate punctate; rostrum deeply sulcate at the base; pygidium tumid: surface incrustate or bare . *sulcifrons*, Chevr.

- g*². Prothorax finely, subuniformly punctate, except along a narrow smooth space down the middle, even; elytra sharply punctate-striate; anterior tibiæ more or less produced at the outer apical angle: upper surface almost bare.
- e*³. Punctuation of the prothorax sparser; elytral interstices very finely punctate *memnonius*, Gyll.
- f*³. Punctuation of the prothorax a little coarser and closer; elytral interstices coarsely uniseriate-punctate *vomerinus*, Lec.
- h*¹. Rostrum feebly compressed or subcylindrical, more slender, not or scarcely widened towards the apex beneath (except in *S. incurrens*).
- h*². Prothorax with a V-shaped area at the base, an oblong subapical depression, and a similar depression near each hind angle, coarsely punctate, the rest of the disc to near the sides smooth or very finely punctured; elytra rather coarsely punctate-striate: surface in great part bare, the punctures sometimes incrustate.
- g*³. Upper surface shining, black *incurrens*, Gyll.
- h*³. Upper surface opaque, varying in colour from black to ferruginous; elytra often with the striæ more coarsely punctate *incurrens*, v. *monilis*, [Gyll.]
- i*². Prothorax with a V-shaped or oblong, coarsely punctured, flattened or depressed, area at the base, the rest of the surface more or less finely punctate, smooth along the median line; elytra crenato- or punctato-sulcate: surface bare and shining.
- i*³. Body ferruginous or rufo-castaneous above, black beneath; the prothorax with three sharply-defined vittæ on the disc, the scutellum, and the elytra sometimes with the alternate interstices, black; elytra crenato-striate.
- a*⁴. Fifth ventral segment sharply hollowed down the middle posteriorly, and the anterior and intermediate femora ciliate, in ♂ *quadrivittatus*, Gyll.
- b*⁴. Fifth ventral segment without definite groove, and the anterior and intermediate femora penicillate at the base, in ♂ *lineatus*, sp. n.
- j*³. Body black (the prothorax and elytra sometimes rufo-lineate or castaneous); elytra punctato-sulcate, with flat, finely punctate interstices *imus*, Gyll.
- j*². Prothorax narrow, with a small space in front of the scutellum rather more coarsely punctured than the rest of the minutely punctate surface, smooth along the median line; elytra sharply punctate-striate, the interstices flat, minutely punctate; anterior tibiæ produced at their outer apical angle: surface bare and shining *angustus*, Boh.

1. *Sphenophorus aterrimus*, sp. n.

Oblong-oval, rather broad, robust, opaque and glabrous above, black. Rostrum a little shorter than the prothorax, moderately stout, feebly curved and deflexed from the short narrowly sulcate basal portion, the latter arcuately swollen above the points of insertion of the antennæ and (as seen in profile) toothed on each side beneath in front of the eyes; somewhat coarsely punctate, becoming smoother towards the tip; the peduncle of the submentum compressed and rectangular in front in the ♀. Prothorax a little broader than long, arcuately narrowing from about the middle, feebly constricted in front, bisinuate at the base; sparsely, finely punctate, the interspaces alutaceous. Scutellum oblong-triangular, hollowed down the middle anteriorly. Elytra much wider than the prothorax, narrowing from the broadly rounded humeri, obtuse at the apex, the disc with one or two faint transverse depressions towards the sides; very finely punctate-striate, the seventh and eighth striae obsolete for some distance below the shoulder, the interstices broad, flat, alutaceous, each with one or two rows of minute punctures down the middle. Pygidium coarsely punctate. Beneath rather coarsely, closely punctate; ventral excavation of the ♂ broad, extending forwards to about the middle of the metasternum. Femora fringed with long, the tibiæ and coxæ with shorter, hairs, the tibiæ almost straight on their outer edge and unarmed at the apex within. Third tarsal joint very large, spongy-pubescent beneath, except along a narrow median line.

Length $14\frac{1}{2}$ –15, breadth $5\frac{4}{5}$ –6 millim. (♂ ♀.)

Hab. MEXICO (*Sallé, Truqui*).

One pair. A large, robust, deep black, bare, opaque form, with the third tarsal joint of each foot broad and spongy-pubescent beneath, the tibiæ unarmed at the apex within and almost straight on their outer edge. The oblique plica limiting the scrobes posteriorly appears dentiform when the rostrum is viewed in profile. This species approaches the European *S. piceus*, but differs from it in the opaque upper surface, the abruptly bowed, shorter rostrum, the more distinctly sinuate base of the prothorax and elytra, the faintly punctured interstices of the latter, and the greatly developed third tarsal joint.

2. *Sphenophorus mundus*, sp. n.

Subfusiform, rather broad, black, opaque and somewhat flattened above, faintly pruinose. Head coarsely, sparsely, irregularly punctate in front, foveate and transversely grooved between the eyes; rostrum barely as long as the prothorax, abruptly bowed from the short, broad, irregularly punctate basal portion, the apical portion subcylindrical, rather slender, almost smooth. Prothorax about as long as broad, obliquely narrowing from a little beyond the middle, feebly constricted in front; punctured along the sides, base, and apex, the disc arcuately depressed posteriorly and almost impunctate. Scutellum triangular, flattened. Elytra moderately long, considerably wider than the prothorax; finely striate, the striae with closely placed rather coarse oval punctures, which become rounded towards the sides, the interstices flat and almost smooth. Pygidium coarsely, closely punctate. Beneath sparsely punctured, the punctures becoming coarse towards the sides. Femora sparsely ciliate beneath, the tibiæ fringed with extremely short hairs, the latter almost straight on their outer edge. Tarsi with the third joint broad, spongy-pubescent beneath.

Length $11\frac{1}{2}$, breadth $4\frac{1}{5}$ millim. (♀.)

Hab. MEXICO, "Sierra de Durango" (*Höge*).

One specimen, recently presented to us by Signor A. Solari. Smaller and more depressed than *S. aterrimus*, the prothorax arcuately excavate in the middle towards the base and with the disc almost impunctate, the elytral striae each with a row of

rather coarse, deep, oval punctures, the third tarsal joint less dilated. *S. mundus* would, perhaps, be almost equally well placed in *Rhodobæus*.

3. *Sphenophorus octocostatus*, sp. n. (Tab. VII. figg. 33, 33 a, ♀.)

Oblong-oval, black, the coarse punctures on the prothorax and pygidium, and the depressed spaces between the elytral costæ, with a reddish-brown incrustation, the rest of the surface more or less shining, the punctures on the under surface and legs each bearing a minute hair-like scale. Rostrum a little shorter than the prothorax, curved, moderately stout, cylindrical, closely punctate, the widened basal portion faintly sulcate up to the frontal fovea, the peduncle of the submentum with a small, compressed, rounded prominence in the ♀. Prothorax about as long as broad, gradually and arcuately narrowing from near the base, feebly constricted in front, bisinuate at the base; very coarsely, irregularly punctate, except along the rather broad, smooth median ridge, the punctures here and there confluent, or separated by smooth flattened spaces. Scutellum triangular, smooth. Elytra moderately long, subtriangular, much wider than the prothorax; each with the four broad costæ and the sutural interstice bare, the finely punctured narrow striæ almost hidden by the dense incrustation, the flattened interstices rather coarsely uniseriate-punctate, the others with an irregular double row of fine punctures. Pygidium coarsely punctate. Beneath very coarsely punctate; ventral excavation of the ♂ long, broad, and shallow. Femora fringed with long, the tibiæ with short, hairs, the tibiæ nearly straight on their outer edge and feebly sinuate and almost unarmed within. Third tarsal joint very large, spongy-pubescent beneath.

Length $12\frac{2}{5}$ –13, breadth 5 – $5\frac{1}{5}$ millim. (♂ ♀.)

Hab. MEXICO, Omilteme and Xucumanatlan in Guerrero, 7000–8000 feet (*H. H. Smith*).

Two males and one female. This species may be readily recognized by the single broad smooth median ridge on the prothorax, which for the rest is very coarsely, confluent punctured, and the four broad glabrous costæ on each elytron. The elytra are very similar to those of *S. costipennis*, Horn *, and *S. striatipennis*, Chittend., and the third tarsal joint is as broad as in *S. aterrimus*.

4. *Sphenophorus ochreus*. (Tab. VIII. figg. 1, 1 a, b, ♂.)

Sphenophorus ochreus, Lec. Proc. Acad. Phil. 1858, p. 80¹; Chevr. Ann. Soc. Ent. Fr. 1885, p. 107²; Chittend. Proc. Ent. Soc. Wash. vii. p. 182 (1905) (nec Horn)³.

Sphenophorus pictus, Lec. loc. cit. p. 80⁴; Horn, Proc. Am. Phil. Soc. xiii. p. 417⁵.

Hab. NORTH AMERICA, Utah³, Vallecito in California^{4 5}.—MEXICO³, Sonora¹.

This is one of those species of *Sphenophorus* (Group III. of Horn) with a dense, glabrous, subopaque or shining, natural, surface-incrustation, and a rather broad third tarsal joint. I have recently seen Gyllenhal's type of *S. æqualis*, and Horn's description of *S. ochreus* must have been taken from specimens of that insect. *S. æqualis* is apparently confined to the Atlantic States and S. Dakota; it may be separated from *S. ochreus* (examples of both of which I have examined) by the coarser, rounded (not oval) punctures of the elytral striæ (fig. 1 b), the villose ventral excavation of the male, &c. We figure a specimen of the true *S. ochreus* kindly sent by Prof. Chittenden.

* There is a specimen of this species in the Sallé collection labelled as from "Costa Rica," but the locality requires confirmation.

5. *Sphenophorus multipunctatus*, sp. n. (Tab. VII. figg. 34, 34 a, ♂.)

♂. Elongate, subfusiform, rather broad, flattened above, opaque, black, the tarsi piecous, the coarse punctures on the upper and under surfaces and legs filled with a pale brownish incrustation. Rostrum a little shorter than the prothorax, moderately stout, subcylindrical, depressed in front of the broad, flattened, sulcate, coarsely punctate basal portion, the apical portion more sparsely punctured, the peduncle of the submentum rounded in front. Prothorax much longer than broad, subcylindrical, abruptly constricted in front, and narrowed at the base, the base and sides feebly sinuate; sparsely punctate, the punctures becoming coarser and more crowded along the sides and down the slightly depressed oblong space at the base. Scutellum rather small, oblong-subtriangular. Elytra a little longer and wider than the prothorax, subcordate, somewhat uneven; with rows of subcontiguous, rounded, foveiform punctures placed along the fine striæ, the interstices flat, similarly punctured, 1, 3, and 5 becoming irregularly biseriately punctate anteriorly. Pygidium and under surface very coarsely, closely punctate; metasternum and first two ventral segments broadly and shallowly sulcate down the middle, the punctures each bearing a fine hair, the fifth segment with a very large, deep, pyriform excavation, bordered on each side by a crenate ridge. Femora and tibiæ sparsely fringed with long hairs, the tibiæ curved and with a very long apical claw, the subapical tooth at the inner apical angle almost obsolete. Third tarsal joint widened and with a narrow spongy-pubescent space on each side beneath.

Length $12\frac{1}{8}$, breadth $4\frac{1}{2}$ millim.

Hab. MEXICO, Tepenistlahuaca in Oaxaca (*Sallé*).

One specimen. A remarkable form, with the coarse punctures of the elytral interstices of about the same size as those of the striæ, the elytra themselves heart-shaped, the prothorax unusually long and subcylindrical, the tibiæ curved, and the deep pyriform excavation of the fifth ventral segment of the male bordered on each side by a crenate ridge.

6. *Sphenophorus cariosus*. (Tab. VIII. figg. 2, 2 a, ♂.)

Calandra cariosa, Oliv. Ent. v. no. 83, p. 91, t. 28. fig. 415¹.

Sphenophorus cariosus, Horn, Proc. Am. Phil. Soc. xiii. p. 420²; Chittend. Proc. Ent. Soc. Wash. vii. p. 177³.

Calandra larvalis, Germ. Ins. Spec. nov. p. 301⁴.

Rhynchophorus cicatricosus, Say, Descr. N. Am. Curc. p. 22⁵; Complete Writings, i. p. 289⁶.

Sphenophorus flexuosus, Gyll. in Schönh. Gen. Curc. iv. p. 940⁷.

Sphenophorus sculptilis, Uhler, Proc. Ac. Phil. 1855, p. 416⁸.

Hab. NORTH AMERICA^{1 3-8}, Middle and Gulf States².—MEXICO (*Mus. Brit.*), Cordova and Jalapa (*Höge*).

Höge has sent us four specimens of this conspicuous N.-American species from definite localities in Mexico, thus extending its distribution to as far south as the State of Vera Cruz. *S. cariosus* may be known by three more or less polished longitudinal flattened ridges on the prothorax (the median one diamond-shaped and abbreviated posteriorly, the others long, sinuous, and complete), and the basally raised third elytral interstice, the fifth also somewhat prominent. The male has the pygidium hairy on each side at the apex, the ventral excavation long and deep, and the third joint of the anterior tarsi slightly widened. A specimen from Cordova is figured.

7. *Sphenophorus cicatistriatus*. (Tab. VIII. figg. 3, 3 a, b, ♂.)

Sphenophorus cicatistriatus, Fähr. in Schönh. Gen. Curc. iv. p. 958¹.

Sphenophorus cicatripennis, Fähr. op. cit. viii. 2, p. 262²; Chevr. Ann. Soc. Ent. Fr. 1885, pp. 110, 111³.

Sphenophorus ulkei, Horn, Proc. Am. Phil. Soc. xiii. p. 413⁴.

Sphenophorus irrelitus, Dugès, in litt.⁵.

♂. Anterior and intermediate femora clothed with coarse erect hairs along their lower face, the hairs towards the base clustered into a matted tuft, the coxæ of the same legs also with a pencil of hairs; all the tibiæ sinuate, sulcate, and fringed with long hairs within; anterior and intermediate tarsi with the third joint wider than in the ♀; ventral excavation broad and deep, extending far forwards along the metasternum.

♀. Anterior and intermediate femora with a small tuft of hairs at the base, a little larger than that on the coxæ; tibiæ clothed with shorter hairs.

Length $7\frac{1}{4}$ –11, breadth $2\frac{3}{4}$ – $4\frac{1}{5}$ millim.

Hab. NORTH AMERICA, Nebraska, Colorado, New Mexico, and Wyoming⁴. — MEXICO^{1 2 3 5} (*Mus. Brit.*; *ex coll. Sturm; Truqui; Flohr*), Northern Sonora (*Morrison*), Guanajuato, Izucar, Puebla (*Sallé*), Mexico city (*Palmer, Höge*), Cholula, Morelia, Irapuato, Cerro de Palmas (*Höge*), Toluca (*Höge, Wickham*), Mixcoac, Salazar (*Wickham*), Yucatan (*Mus. Brit.*).

A common insect on the Mexican plateau, specimens from thence agreeing perfectly with others from Colorado and Wyoming sent me by Prof. F. H. Chittenden. It may be known by the slightly produced outer apical angle of the anterior tibiæ, and the large, oval or horseshoe-shaped, foveæ (fig. 3 b) placed along the narrow, sharply-cut, elytral striæ, the foveæ in some examples being divided into two by the raised edges of the stria. The sculpture of the prothorax is very variable, but the V-shaped, coarsely punctured, depressed area at the base and the oblong similarly-punctate depression in front are always traceable. The anterior tibiæ are sharply dentate on the inner side towards the apex. The rostrum is short and stout, narrowly sulcate at the base, and, as seen in profile, sharply, rectangularly dilated at the apex beneath. The pygidium has a small tuft of hairs on each side at the apex. In one of two examples from Guanajuato (a ♂) the puncturing of the prothorax is unusually dense, and the alternate elytral interstices are narrowly raised and here and there transversely confluent. In another (♀), from Sonora, the prothorax is comparatively smooth, with the coarsely punctured basal and apical depressions only just indicated, and the foveæ on the elytra rounded and somewhat widely separated. *S. cicatripennis* was based upon examples with a comparatively smooth prothorax, fewer foveæ on the elytra, and the depressions of the surface "pulverulent." Mr. Wickham met with this species at various places near the city of Mexico in August last. We are indebted to him, and to Prof. Chittenden, for specimens of *S. ulkei*, Horn.

8. *Sphenophorus reticulaticollis*. (Tab. VIII. fig. 4, ♀.)

Sphenophorus reticulaticollis, Boh. in Schönh. Gen. Curc. viii. 2, p. 257¹ (nec Chittend.).

? *Sphenophorus vestitus*, Chittend. Proc. Ent. Soc. Wash. vi. pp. 132, 134 (1904)².

Hab. NORTH AMERICA, California¹, Georgia, Florida, &c.², Texas.—MEXICO (*Sallé*, *Mus. Brit.*), Guadalajara (*Höge*), Toluca (*Wickham*).

Seven N.-American species of the *S. venatus* and *S. reticulaticollis*-group of this genus are recognized by Prof. Chittenden (six of which he has kindly sent for examination), but it seems to me to be very doubtful if they can all be maintained as distinct. The muddy-looking incrustation frequently disguises the true coating of the surface and hides a great deal of the sculpture, and it will probably be found that too much reliance has been placed upon this character for distinguishing the insects in question*. I follow him, however, in retaining *S. reticulaticollis*, Boh. (nec Chittend.) (the type† of which I have seen), as distinct from *S. venatus* and *S. placidus*, Say, for the present, and his *S. vestitus* seems to me to be inseparable from it. The present species is recognizable by the thin, rather dense, brownish-grey or olivaceous coating; the very coarsely punctured prothorax, with the Y-shaped median ridge, and the oblique curved ridge on each side of it, moderately prominent; the large, deep, scattered punctures along the elytral striæ; the small tuft of hairs on each side of the pygidium at the tip in both sexes; and the deeply excavate first ventral segment in the male. The elytra are more or less transversely wrinkled, or have the alternate interstices a little raised, and there is usually a bare, shining, oblong spot on the shoulder and another on the subapical callosity. The rostrum is compressed, and acutely dilated at the apex beneath (as seen in profile), strongly so in the female. The anterior and intermediate femora and coxæ have each a small tuft of hairs. The specimen from Guadalajara agrees very nearly with one of the two examples (that from Louisiana) of *S. vestitus* sent by Prof. Chittenden, the five others from Mexico before me having (as in the type) more rugose elytra. *S. phæniciensis*, Chittend., from Arizona, is also closely related to these insects.

9. *Sphenophorus hoegbergi*.

Sphenophorus hoegbergii, Boh. in Schönh. Gen. Curc. viii. 2, p. 254¹; Chevr. Ann. Soc. Ent. Fr. 1885, p. 109².

? *Sphenophorus coactorum*, Chittend. Proc. Ent. Soc. Wash. vi. pp. 132, 136 (1904)³.

Hab. NORTH AMERICA, Texas³.—MEXICO², Vera Cruz¹, Cordova (*Höge*).

This insect is probably an extreme form of the variable *S. reticulaticollis* with the incrustation thicker and denser, and extending to the scutellum; it mainly differs from the latter in the shallowly depressed first ventral segment of the male. The type,

* The pruinosity of the scutellum often disappears in *Rhodobanus pustulosus* and its allies.

† It bears two locality-labels—"Mexico" and "Calif"

which I have seen, is a male, and we have two others from Cordova agreeing with it. They have the prothoracic depressions a little more distinct than in the Texan examples of *S. coactorum* kindly forwarded by Prof. Chittenden. The *S. reticulaticollis* of the last-named author (nec Boh.), from Los Angeles, California, &c., is closely related to *S. hoegbergi*.

10. *Sphenophorus terricola*, sp. n.

Oblong-oval, robust, opaque above, black, covered with a brownish incrustation, which partly hides the elytral sculpture. Rostrum curved, stout, compressed, barely two-thirds the length of the prothorax, closely punctate above, smooth at the sides anteriorly, angularly dilated at the apex beneath, the widened basal portion shallowly sulcate up to the frontal fovea. Prothorax longer than broad, somewhat rounded at the sides, bisinuate at the base; densely punctate, except along the smooth, raised, incomplete median line, which posteriorly intersects the oblong, depressed, more coarsely punctured, V-shaped basal area, and is sometimes preceded by a shallow oblong depression. Scutellum triangular, bare. Elytra a little wider than the prothorax, oblong-subcordate; narrowly striate, the striæ with scattered moderately coarse punctures, which are each enclosed in a large shallow fovea, the interstices closely and finely uni- or biserially punctate, 3, 5, 7, and 9 narrowly raised. Pygidium closely punctate, broad in the ♂, narrower in the ♀, furnished with a small tuft of fulvous hairs on each side at the tip. Beneath closely punctate, the ventral excavation of the ♂ long and deep. Anterior and intermediate femora each with a matted tuft of long hairs at the base and some shorter hairs between this and the apex. Tibiæ sinuate, and fringed with long hairs towards the apex, within, the apical spur very long, the anterior pair with a sharp subapical tooth on the inner edge. Anterior tarsi with the third joint very slightly widened in the ♂.

Length $8\frac{1}{2}$ – $9\frac{3}{8}$, breadth $3\frac{1}{4}$ –4 millim. (♂ ♀.)

Hab. MEXICO, Northern Sonora (*Morrison*).

Eleven specimens, all in dirty condition. Very like *S. cicatistriatus*, but with the punctures of the elytral striæ smaller and each surrounded by a large shallow fovea; the prothorax densely punctate, except along the incomplete raised median line; the third joint of the anterior tarsi of the male less widened. The elytral sculpture cannot be seen properly till the incrustation is removed. *S. soltau*, Chittend., is a somewhat closely allied form.

11. *Sphenophorus cœsifrons*.

Sphenophorus cœsifrons, Gyll. in Schönh. Gen. Curc. iv. p. 959¹; Chevr. Ann. Soc. Ent. Fr. 1885, p. 109².

♂. Ventral excavation long, broad, and deep; tibiæ hollowed along their outer half within.

Hab. MEXICO^{1 2} (*Mus. Brit.*).

There is a single specimen (♂) of this species in the British Museum, agreeing with the type. It is a small, oblong, black form, with the surface (except along the middle beneath) covered with a brownish incrustation, partly hiding the sculpture. The rostrum is rather short, stout, compressed, deeply sulcate at the base above, and (as seen in profile) rectangularly dilated at the apex beneath. The prothorax is longer than broad, densely, coarsely punctate, except along the smooth abbreviated median

line, and has a large, V-shaped, shallow depression on the basal half of the disc. The elytra are rather short, rounded-subtriangular, finely striate, with the interstices flat and finely uniseriate-punctate. The tibiæ are strongly sinuate and feebly ciliate within, and have a rather short apical claw. The anterior femora are clothed with short hairs beneath. The third tarsal joint is narrow. *S. cæsifrons* is extremely like *S. oblitus*, Lec., but has the rostrum more deeply sulcate at the base, the prothorax less dilated at the sides, and the tibiæ armed with a subtriangular subapical tooth and a much shorter claw at the apex.

12. *Sphenophorus lutulentus*, sp. n.

Oblong-oval, somewhat flattened above, opaque, nigro-piceous or black, the upper and under surfaces covered with a pale brownish incrustation. Rostrum very stout, curved, compressed, about two-thirds the length of the prothorax, sharply angulate at the apex beneath (as seen in profile), the broad basal portion closely punctate and deeply sulcate, the apical portion smooth at the sides. Prothorax a little longer than broad, somewhat rounded at the sides, abruptly constricted in front, feebly sinuate at the base, the apical margin also sinuate on each side; densely, coarsely, subconfluently punctate, except along the narrow, abbreviated, smooth, raised median line. Scutellum narrow, bare. Elytra slightly wider than the prothorax, rounded-subtriangular; narrowly striate, the striæ with small, widely scattered, rounded punctures, the interstices flat, broad, each with one or two rows of minute punctures. Pygidium coarsely punctate, closely ciliate at the apex in the ♂, with a small tuft on each side at the tip in the ♀. Beneath and the legs somewhat closely punctate, the fifth ventral segment very coarsely punctured, unimpressed in the ♂, the ventral excavation in this sex long and rather deep. Anterior and intermediate femora and coxæ each with a small tuft of hairs. Tibiæ fringed with short hairs and sinuate within, the subapical tooth short, the apical spur long. Third tarsal joint narrow.

Length $10-10\frac{1}{2}$, breadth $3\frac{4}{5}-4$ millim. (♂ ♀.)

Hab. N. MEXICO, Paso del Norte (*Höge*: ♀), Saltillo in Coahuila (*Wickham*: ♂).

One pair, the male with the head and prothorax abnormally formed, both so closely incrustate when captured that the sculpture could scarcely be made out*. The chief characters of this species are, the short, stout, compressed, apically angulate, basally sulcate rostrum; the coarsely, subconfluently punctured prothorax, with faintly indicated smooth median line and abrupt subapical constriction; and the finely striate, subcordate elytra. The Texan *S. oblitus*, Lec., is an allied form, with the sides of the prothorax straighter behind, the tibiæ armed with a long subapical tooth, &c.

13. *Sphenophorus sulcifrons*.

Sphenophorus sulcifrons, Chevr. Ann. Soc. Ent. Fr. 1885, p. 110¹.

Sphenophorus terreus, Jekel, in litt.².

♂. Ventral excavation broad, long, and deep, extending down the second segment, the fifth transversely depressed at the apex.

Length $6\frac{1}{2}-11\frac{1}{2}$, breadth $2\frac{1}{2}-4\frac{2}{3}$ millim. (♂ ♀.)

Hab. MEXICO (*Mus. Brit.*, *Flohr*), Toxpan (*Sallé*), Cordova, Vera Cruz, Jalapa, Oaxaca (*Höge*).

* They have since been cleaned with caustic potash.

The numerous examples received of *S. sulcifrons*, mostly from Vera Cruz, represent two forms:—one (agreeing with the type) bare, shining, with numerous punctures along the elytral striæ, and the hairs on the legs partly or entirely wanting; the other opaque (even when cleaned with caustic potash), more or less incrustate, with fewer punctures along the elytral striæ, and the femora and tibiæ conspicuously ciliate. These forms have been received from the same locality and there can be no doubt that they belong to one and the same species. It has the rostrum stout, compressed, and moderately long, sharply dilated at the apex (as seen in profile), and the widened basal portion deeply sulcate; the prothorax sparsely, coarsely, unequally punctate; the elytra with coarse, rounded, foveiform punctures placed along the narrow striæ, and the interstices somewhat coarsely uniseriate-punctate; the pygidium very coarsely punctured, tumid down the middle, and hollowed on each side; the femora and tibiæ more or less ciliate in both sexes; and the anterior tibiæ not produced at the outer apical angle. The tumid pygidium and the deeper rostral sulcus separate *S. sulcifrons* from *S. callosus* (Oliv.), and *S. destructor* and *S. sublævis*, Chittend., the last-mentioned insect corresponding with the denuded examples of the present species.

14. *Sphenophorus memnonius*.

Sphenophorus memnonius, Gyll. in Schönh. Gen. Curc. iv. p. 935¹; Chevr. Ann. Soc. Ent. Fr. 1885, p. 109².

Sphenophorus simplex, Lec. Proc. Acad. Phil. 1859, p. 79³; Horn, Proc. Am. Phil. Soc. xiii. p. 412⁴; Chittend. Proc. Ent. Soc. Wash. vi. pp. 128, 130 (1904)⁵.

♂. Pygidium with a small tuft of hairs on each side at the tip. Ventral excavation very long and deep, the fifth segment unimpressed as in the ♀.

Length $7\frac{1}{2}$ –11, breadth $2\frac{4}{5}$ – $4\frac{1}{10}$ millim. (♂ ♀.)

Hab. NORTH AMERICA, California³⁴, Utah³⁵.—MEXICO¹² (*Truqui*, *Mus. Brit.*), Guanajuato (*Salle*), Mexico city (*Höge*, *Wickham*), Guadalupe, Distrito Federal (*Wickham*), Yucatan (*Mus. Brit.*).

Var. The rostrum distinctly sulcate at the base; the elytra with broader and more coarsely punctured striæ, and the interstices in great part uniseriate-punctate; the under surface more coarsely punctate, the fifth ventral segment especially. (♂ ♀.)

Hab. MEXICO, Aguas Calientes city (*Höge*), Durango city (*Wickham*).

This is one of several Mexican forms related to the N.-American *S. vomerinus*, Lec. It has a rather short, stout, compressed, apically widened rostrum (as seen in profile), with the widened basal portion closely punctate, and finely sulcate; the prothorax closely punctate, except along a narrow space down the middle, and without trace of a more coarsely punctured V-shaped area at the base; the scutellum long, narrow, and faintly sulcate; the elytra narrowly, deeply, and rather coarsely punctate-striate, with the alternate interstices irregularly bi-, and the others uni-, seriatly punctured (the punctures sometimes very fine); the anterior and intermediate femora

each with a tuft of hairs at the base similar to that on the coxæ; the tibiæ strongly sinuate and fringed with long hairs within, the anterior pair (and sometimes the intermediate pair also) with a sharp subapical tooth on the inner edge, the anterior pair distinctly produced at the outer apical angle; the third tarsal joint small. I have seen numerous specimens of *S. memnonius* (including the type) and one of *S. simplex*, the latter kindly supplied by Prof. Chittenden; the variety is represented by three examples from each locality, one of them measuring only $6\frac{1}{4}$ mm.

15. *Sphenophorus vomerinus*.

Sphenophorus vomerinus, Lec. Proc. Acad. Phil. 1858, p. 81¹; Horn, Proc. Am. Phil. Soc. xiii. p. 413²; Chevr. Ann. Soc. Ent. Fr. 1885, p. 107³.

Hab. NORTH AMERICA, Colorado, Arizona, and California east of the Sierras².—MEXICO³, Sonora (*Webb*¹).

The type of this species was from Sonora. The only specimens I have seen of it, from Kansas and Arizona, belong to the var. *baridioides*, Lec.; they have the elytral interstices more coarsely punctate (the sutural one confusedly, and the others uniseriately) than in any of the allied Mexican forms known to me. *S. graminis*, Chittend., is very similar to *S. vomerinus*, but has more closely and less coarsely punctured elytral interstices.

16. *Sphenophorus incurrens*. (Tab. VIII. figg. 5, 5 a, ♀.)

Sphenophorus incurrens, Gyll. in Schönh. Gen. Curc. iv. p. 957¹; Chevr. Ann. Soc. Ent. Fr. 1885, p. 109².

Sphenophorus glabripes, Chevr. loc. cit. p. 110³.

♂. Ventral excavation long and deep, in some specimens very sparsely, in others more coarsely and closely, punctate; fifth segment with a large, deep, subtriangular, very coarsely, rugosely punctate fovea at the apex.

♀. Fifth ventral segment with a slightly smaller fovea.

Var. Above opaque, ferruginous, fusco-castaneous, or piceous, the prothorax sometimes with the oblique tumid space on each side of the V-shaped, coarsely punctate, basal area, and an abbreviated median line, black; the elytral interstices feebly convex or flat.

Length $6\frac{1}{2}$ –10, breadth $2\frac{1}{2}$ – $3\frac{2}{3}$ millim.

Sphenophorus monilis, Gyll. loc. cit. p. 946⁴; Chevr. loc. cit. p. 109⁵.

Sphenophorus impressicollis, Sturm, in litt.⁶.

Hab. MEXICO¹⁻⁶ (*ex coll.* Sturm, Truqui, Flohr), Puebla, Durasnal, Toxpam, Capulalpam, Chiapas (*Sallé*), Matamoros Izucar, Mexico city, Cerro de Palmas, Cordova, Misantla, Jalapa, Vera Cruz, Juquila, San Juan Bautista (*Höge*), Omilteme, Orizaba, Teapa (*H. H. Smith*), Toluca (*Sallé, Höge, Wickham*), Oaxaca (*Mus. Brit.*); GUATEMALA, Guatemala city, Dueñas, San Gerónimo (*Champion*), Tecpan (*Conradt*); COSTA RICA, Rio Sucio, Irazu, Caché (*Rogers*), La Palma (*Biolley*); PANAMA (*Lemoine, in Mus. Brit.*).

Sent in abundance from various localities in Mexico and Costa Rica, the long series connecting the three forms described by Gyllenhal and Chevrolat, whose types I have seen: *S. monilis* is based upon reddish opaque examples with the elytral interstices almost flat; *S. glabripes* upon a specimen (σ) with the coarse punctures on the V-shaped basal depression of the prothorax continued forwards on each side in a curved line to the oblong subapical excavation. The present species may be recognized in all its varieties by the large, deep, rugosely punctate, subtriangular fovea on the fifth ventral segment in both sexes. It has the rostrum rather slender, slightly compressed, narrowly sulcate at the base, and angularly dilated near the apex beneath; the prothorax with a V-shaped depressed area at the base, an oblong depression towards the apex, the sides, and often a fovea near the hind angles, very coarsely punctate; the elytra with rows of oval or rounded foveæ placed upon narrow striæ; the tibiæ fringed with very short hairs, the anterior pair obliquely truncate at the apex, and all with a very long uncus; and the third tarsal joint small. The sculpture of the prothorax and elytra is variable. The opaque reddish form (*S. monilis*) has only been seen from Mexico. *S. pontederiæ*, Chittend., from Texas, &c. (two males of which are before me), is very closely related to the present species, but differs from it in the subcylindrical rostrum, which is very feebly angulate at the apex beneath, the much more coarsely punctured under surface, and the shallower depression on the fifth ventral segment.

17. *Sphenophorus quadrivittatus*. (Tab. VIII. figg. 6, 6 a, ♀.)

Sphenophorus quadrivittatus, Gyll. in Schönh. Gen. Curc. iv. p. 962¹; Chevr. Ann. Soc. Ent. Fr. 1885, p. 109².

Sphenophorus bicolor, Jekel, in litt.³.

♂. Anterior and intermediate femora more or less clothed with erect matted hairs along their lower face; anterior coxæ with a large, and the other coxæ with a smaller, tuft of matted hairs; ventral excavation very long and deep, sparsely, finely punctate, the fifth segment also hollowed down the middle from near the base to the apex.

♀. Anterior and intermediate femora each with a small pencil of hairs at the base, similar to that on the coxæ; fifth ventral segment transversely depressed at the apex.

Length $7\frac{1}{10}$ –9, breadth $2\frac{1}{2}$ – $3\frac{2}{5}$ millim.

Hab. MEXICO^{1 2 3} (*Mus. Brit.*; *Truqui*), Puebla (*Sallé*), Mexico city (*Höge*).

This is one of several similarly coloured Mexican forms. It has the prothorax rufo-quadrivittate (the two narrow dorsal vittæ sometimes wanting), with a coarsely punctate, V-shaped, depressed area at the base; the elytra coarsely crenate-striate, with the interstices flat or feebly convex, faintly uniseriate-punctate, and the alternate ones (1, 3, 5, 7) often more or less infuscate or black; the apical portion of the pygidium transversely depressed and coarsely punctate on each side of the raised median line; the rostrum moderately stout, and (as seen in profile) angulate at the apex beneath; and the tibiæ fringed with long hairs in both sexes. I have not seen

the type of *S. quadrivittatus*, but as Sallé's specimens must have come from the same source there is little doubt about the determination. The above description of the sexual characters is taken from the series obtained by Truqui, amongst which there are three males.

18. *Sphenophorus lineatus*, sp. n. (Tab. VIII. fig. 7, ♂.)

Very like *S. quadrivittatus*, black beneath, ferruginous above, the prothorax with three vittæ on the disc, and the elytra sometimes with the alternate dorsal interstices, infuscate or black; the legs ferruginous, the femora striped or maculate with black. Rostrum moderately stout, feebly curved, almost smooth, angulate at the apex beneath (as seen in profile), feebly dilated just before the base, foveate between the eyes, the basal portion not sulcate. Prothorax as in *S. quadrivittatus*, the elytra more coarsely crenate-striate, with feebly convex interstices. Pygidium with the depressed spaces at the apex still more coarsely punctate. Femora almost smooth, the anterior and intermediate pairs in both sexes with a small pencil of hairs at the base similar to that on the coxæ. Ventral excavation of the ♂ very long and deep, almost smooth; the fifth segment in both sexes transversely depressed at the tip and coarsely punctured throughout, the other segments similarly punctate laterally.

Length $7\frac{1}{3}$ –9, breadth $2\frac{1}{2}$ – $3\frac{1}{8}$ millim. (♂ ♀.)

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

Three males and one female. The non-sulcate, coarsely punctate fifth ventral segment, and the very small tuft of hair on the anterior and intermediate femora and coxæ, in the male, and the coarsely punctured fifth ventral segment in the female, distinguish *S. lineatus* from *S. quadrivittatus*. The allied S.-American *S. brunnei-pennis*, Germ. (*signaticollis*, Gyll.), has a longer and more coarsely punctured area on the disc of the prothorax, the anterior and intermediate femora fringed with short hairs beneath, the pygidium convex, &c.

19. *Sphenophorus imus*.

Sphenophorus imus, Gyll. in Schönh. Gen. Curc. iv. p. 936¹; Chevr. Ann. Soc. Ent. Fr. 1885, p. 109².

♂. All the femora along their lower face, a large patch on the anterior coxæ, a smaller one on the intermediate coxæ, and a rather broad space down the middle of the fifth ventral segment, clothed with short, decumbent, ochreous hairs; tibiæ ciliate within; ventral excavation long and deep, closely punctate.

♀. Anterior and intermediate femora with a few hairs at the base, and the coxæ of the same legs each with a small tuft; tibiæ fringed with shorter hairs.

Var. The prothorax with four narrow vittæ, and the elytra with the alternate interstices, rufescent.

Length $6\frac{3}{4}$ –10, breadth $2\frac{2}{5}$ – $3\frac{1}{2}$ millim.

Hab. MEXICO^{1 2} (*Truqui*, *Flohr*), Paso del Norte (*Höge*), Puebla, Izucar, Guanajuato (*Sallé*), Toluca (*Höge*), Durango city, Tepehuanes (*Wickham*).

I have seen nineteen specimens of this species, including the type, one of those from Puebla (a ♂) and another from Toluca (a ♀) having four faint vittæ on the prothorax and the alternate elytral interstices rufescent. *S. imus* may be known by the rather long, slender, subcylindrical rostrum, with the widened basal portion not sulcate; the relatively narrow prothorax, with an oblong, mesially interrupted,

coarsely punctured area at the base; the punctate-sulcate elytra, with the interstices flattened and very finely, irregularly seriate-punctate; the more or less produced outer apical angle of the anterior tibiæ; the small third tarsal joint; and the peculiar male-characters. *S. imus* has been recorded by Kirsch* from the Rio Grande do Sul and Monte Video, probably in error.

20. *Sphenophorus angustus*. (Tab. VIII. figg. 8, 8 a, ♂.)

Sphenophorus angustus, Boh. in Schönh. Gen. Curc. viii. 2, p. 250¹.

♂. Anterior coxæ with a long, narrow, oblique tuft, and the intermediate coxæ with a smaller tuft, of coarse, matted, ochreous hairs; anterior and intermediate femora clothed with short hairs along their lower face; posterior tibiæ closely, and the other tibiæ more sparsely, ciliate within; ventral excavation very long and deep, coarsely, closely punctate, each puncture bearing a small ochreous scale, the fifth segment unimpressed.

♀. Anterior and intermediate femora and coxæ each with a small tuft of hairs, the posterior tibiæ less closely ciliate.

Length $7\frac{1}{5}$ – $9\frac{1}{2}$, breadth $2\frac{1}{2}$ – $3\frac{1}{10}$ millim. (♂ ♀.)

Hab. MEXICO¹ (*Mus. Brit.*, *Flohr*), Durango city (*Wickham*), Mexico city (*Höge*), Real del Monte (*Richardson*).

This insect belongs to Horn's Group I. of the genus. It has the prothorax comparatively smooth (the punctuation being very fine and scattered, except at the middle of the base, where there is a cluster of coarser impressions) and narrow; the rostrum subcylindrical, and with the widened basal portion convex; the scutellum narrow and sulcate; the elytra with the striæ narrow and rather coarsely punctate, and the interstices flat and very finely uni- or biseriate-punctate; the prosternum sulcate down the middle anteriorly; the anterior tibiæ produced at the outer apical angle; and the third tarsal joint narrow. The elytra are sometimes castaneous. I have seen six examples of *S. angustus* (which is incorrectly treated by Chevrolat as synonymous with *S. cicatripennis*), including the type. The two males before me agree perfectly *inter se*. The long narrow streak of dense matted hairs on the anterior coxæ is a remarkable character in this sex.

Group CALANDRINA.

PHRYNOIDES.

Phrynoides, Chevrolat, Ann. Soc. Ent. Fr. 1885, p. 94.

This remarkable Tropical-American genus is said by Chevrolat to be related to *Crepidotus* (of the Group Sphénocorynides of Lacordaire), but it seems to me to be better placed amongst the "Calandrides vrais," near *Eugnoristus* and *Calandra*. It has the rostrum almost straight; the eyes contiguous beneath; the antennal club moderately long, cylindrical, obliquely truncate at the tip, and with the basal joint

* Abhandl. Mus. Dresden, 1889, p. 55.

incrustate to near its apex; the scutellum broad and rounded; the elytra very broad, subtriangular, and sparsely nodulose; the pygidium subvertical; the mesothoracic epimera angularly ascending; the anterior coxæ narrowly, and the intermediate coxæ widely, separated; the intercoxal portion of the mesosternum angularly excised in the middle; the third tarsal joint broad, and spongy-pubescent beneath; and the entire body covered with a dense natural incrustation.

1. *Phrynoides luteus*. (Tab. VIII. figg. 9, 9 a, ♂.)

Phrynoides luteus, Chevr. Ann. Soc. Ent. Fr. 1885, p. 95¹.

♂. Rostrum rugosely punctate and feebly tricarinate to near the tip; metasternum and first ventral segment very broadly and shallowly depressed down the middle.

♀. Rostrum simply striato-punctate to the tip, the apical half bare and shining; the metasternum and first ventral segment flattened.

Length $7\frac{1}{2}$ –8, breadth 4 millim. (Chevrolat gives 9 long, 5 broad).

Hab. PANAMA, Volcan de Chiriqui 2500–4000 feet (*Champion*).—AMAZONS, Pará¹.

One pair, a little smaller than the discoloured type, which I have seen. The elytra (when cleaned) have the basal half of the disc brownish cinereous and the apical portion reddish-brown, the latter becoming darker along the anterior edge.

CALANDRA.

Calandra, Clairville, Ent. Helv. i. p. 62 (1798); Lacordaire, Gen. Col. vii. p. 301; Horn, Proc. Am. Phil. Soc. xiii. p. 430; Leconte, op. cit. xv. p. 332; Casey, Ann. N. York Acad. Sci. vi. p. 685.

Sitophilus, Schönherr, Gen. Curc. iv. p. 967 (1837).

This genus, the type of which is *C. granaria* (L.), includes at present various heterogeneous forms, and will have to be divided sooner or later. Two endemic and three cosmopolitan forms are represented in the collections before me, the first-mentioned having broad, and the other three narrow, metasternal side-pieces. *C. mexicana* has a long antennal club, a broad, subcordate, prominent scutellum, &c., and it will doubtless have to be eliminated when further material is available for examination.

1. *Calandra granaria*.

Curculio granarius, Linn. Syst. Nat. 10th edit. p. 378¹.

Sitophilus granarius, Gyll. in Schönh. Gen. Curc. iv. p. 977².

Calandra granaria, Leconte, Proc. Am. Phil. Soc. xv. p. 333³; Casey, Ann. N. York Acad. Sci. vi. p. 686⁴.

Sitophilus remotepunctatus, Gyll. loc. cit. p. 979⁵; Horn, Proc. Am. Phil. Soc. xiii. p. 431⁶; Leconte, op. cit. xv. p. 333⁷.

Hab. Fere orbe terrestris.

Much less abundant than *C. oryzae* in our region and as yet only seen from Mexico. The type of *S. remotepunctatus* was from New York⁵.

2. *Calandra linearis*.

Rhynchophorus linearis, Herbst, Käfer, vii. p. 5, t. 100. fig. 1¹.

Sitophilus linearis, Gyll. in Schönh. Gen. Curc. iv. p. 979².

Calandra linearis, Casey, Ann. N. York Acad. Sci. vi. p. 686³.

Calandra tamarindi, Christy, Trans. Ent. Soc. Lond. i. p. 36⁴.

Var. *Cordyle striatus*, Thunb. in Nova Acta Ups. vii. p. 112⁵.

Hab. NORTH AMERICA, Atlantic States³.—COSTA RICA, San José (*Biolley*).—ANTILLES, Cuba, Jamaica², St. Bartholomew²; BRAZIL (*coll. Fry*).—INDIA, Bengal⁵, &c.

There is a single specimen of this species amongst the Calandrids received by us from the late P. Biolley. It is probably a native of India.

3. *Calandra oryzae*.

Curculio oryzae, Linn. Amœn. Acad. vi. p. 395 (1763)¹.

Sitophilus oryzae, Gyll. in Schönh. Gen. Curc. iv. p. 981².

Calandra oryzae, Horn, Proc. Am. Phil. Soc. xiii. p. 430³; Leconte, op. cit. xv. p. 333⁴; Casey, Ann. N. York Acad. Sci. vi. p. 686⁵.

Calandra zea-mais, Motsch. Études Ent. iv. p. 77 (1855)⁶; Casey, loc. cit. p. 686⁷.

Hab. Fere orbe terrestris.

A very variable and abundant insect, extremely destructive to maize*, often attacking the grain in the fields before it is gathered. *C. zea-mais* is a large form of the same species. In the Sallé collection there are three specimens from Belize of unusually small size. Casey⁵ has described an allied form with anastomosing sinuous rugæ on the prothorax under the name *C. rugicollis* upon a single specimen from Florida.

4. *Calandra setulosa*. (Tab. VIII. figg. 10, 10 a, ♀.)

Sitophilus setulosus, Gyll. in Schönh. Gen. Curc. iv. p. 969¹.

Calandra setulosa, Gemm. & Harold, Cat. Col. viii. p. 2653².

♂. Rostrum coarsely, closely punctate, subcarinate, and more or less asperate, to the tip; first ventral segment broadly depressed down the middle.

♀. Rostrum more slender, shining, smooth along the middle, becoming finely striato-punctate towards the apex.

Hab. MEXICO^{1 2} (*U.S. Nat. Mus.*), Toxpam (*Sallé*), Orizaba (*Höge*), Cordova (*Höge*; *Knab*, in *U.S. Nat. Mus.*); GUATEMALA, Panzos (*Conradt*), Chacoj in Alta Vera Paz (*Champion*); HONDURAS (*Mus. Brit.*); COSTA RICA, Caché (*Rogers*), Tablazo (*Biolley*), Azahar de Cartago (*Underwood*), San Carlos (*U.S. Nat. Mus.*); PANAMA, Chiriqui (*coll. Godm. & Salv.*).—COLOMBIA; VENEZUELA.

Apparently not uncommon in the Mexican State of Vera Cruz. This species may

* Biolley notes that it also attacks an allied plant, the "teosinte," *Euchlena (Rheana) luxurians*, in Costa Rica. This genus of grasses (*cf. Biol. Centr.-Am., Botany*, iii. p. 512) is peculiar to America.

be recognized by its elongate form, the opaque, setulose upper surface, the line of rather large yellowish-white scales along the sides of the prothorax, the oblong or elongate similarly-coloured spots on the elytra (at the base and beyond the middle), and the serrate inner edge of the tibiæ.

5. *Calandra mexicana*, sp. n. (Tab. VIII. figg. 11, 11 *a*, *b*, ♂.)

♂. Elongate, flattened, rather narrow, subopaque, almost bare; black, the antennæ and tarsi obscure ferruginous. Head closely punctate, separated from the rostrum by a transverse groove, which is foveate in the middle; rostrum very feebly curved, rather slender, nearly as long as the prothorax, cylindrical, sparsely, obsoletely lineato-punctate, the short, dilated basal portion coarsely punctured; antennal club conico-cylindrical, a little longer than joints 4-6 of the funiculus united. Prothorax longer than broad, rounded at the sides, narrowed and constricted in front, truncate at the base; coarsely, densely, uniformly punctate. Scutellum prominent, transversely cordate, rather large, smooth. Elytra about one-fourth longer, but not wider, than the prothorax, very gradually narrowing from the rounded humeri, subtruncate at the apex; deeply punctate-striate, the interstices flat, not wider than the striæ, and each with a regular row of closely-placed, coarse, deep, oval or rounded punctures (fig. 11 *b*). Pygidium about as long as broad, rounded at the tip, coarsely, closely punctate. Beneath very coarsely, closely punctate; first ventral segment hollowed down the middle. Legs rather short; femora and tibiæ coarsely punctured, the tibiæ feebly sinuate within, toothed at the inner apical angle, and with the apical claw rather short; third tarsal joint broad, with a densely pilose space along the apical margin beneath. Length $6\frac{3}{8}$, breadth $2\frac{1}{2}$ millim.

Hab. MEXICO, Zacualtipan in Hidalgo (*Höge*).

One male. This species agrees with *C. setulosa* in having largely developed, angularly ascending mesothoracic epimera and broad metathoracic episterna; but the antennal club is elongate, the scutellum is larger and transversely cordate, the pygidium is shorter, and all the tibiæ are toothed at the inner apical angle. The large, ascending mesothoracic epimera, the less developed metathoracic episterna, the transverse scutellum, the long antennal club, &c., separate *C. mexicana* from *Metamasius submaculatus* and its allies.

Group LITOSOMINA.

TOXORRHINUS.

Toxorhinus, Lacordaire, Gen. Col. vii. p. 304 (1866).

The type of this genus is *Sitophilus banonii*, Guér., from Cayenne, a species ranging to as far north as the Isthmus of Panama, whence I have recently seen an example captured by Mr. Busck in 1907.

1. *Toxorrhinus banoni*.

Sitophilus banonii, Guér. in Icon. Règne Anim. p. 172¹.

Toxorhinus banonii, Lacord. Gen. Col. vii. p. 305, Atlas, p. 27, t. 76. figg. 5, 5 *a*².

Hab. PANAMA, Tabernilla, Canal Zone (*Busck*, in *U.S. Nat. Mus.*).—SOUTH AMERICA, Ecuador, Cayenne^{1 2}, Brazil.

An insect easily recognizable by its narrow form, the very long and slender rostrum, the long legs and antennæ, and the slender, elongate, X-shaped, white mark common to the prothorax and elytra, the prothorax along the sides and at the lower part of the flanks, and the metathoracic episterna, also albo-lineate.

Group SIPALINA.

Sipalides, Lacordaire (part.).

Calandridæ subfam. *Rhinidæ*, Leconte.

Under this group are included the Calandrids with the pygidium covered by the elytra. The African Sclérocardiides have a 7-jointed funiculus, and also differ in other respects from the Sipalides of Lacordaire, and they will probably have to be assigned a different position.

Sect. ORTHOGNATHIDES.

Orthognathides, Lacordaire.

ORTHOGNATHUS.

Orthognathus, Schönherr, Gen. Curc. iv. p. 812 (1838) ; Lacordaire, Gen. Col. vii. p. 311.

Sphæognathus, Schönherr, op. cit. viii. 2, p. 215.

This genus was based upon a remarkable insect from Brazil. *Mesocordylus subparallelus*, Chevr., also belongs to it, differing from the type, *O. lividus*, in the armature of the inner apical angle of the tibiæ. The sexual distinctions are feebly developed in both of them.

1. *Orthognathus subparallelus*. (Tab. VIII. figg. 12, 12 a, b, ♂.)

Mesocordylus subparallelus, Chevr. Bull. Soc. Ent. Fr. 1880, p. cxxiv¹.

Calandra crenatosulcata, Sturm, in litt.²

♂. Rostrum interruptedly bisulcate above; tibiæ fringed with long hairs within.

♀. Rostrum smoother and narrower, the sulci shallower or almost obsolete; tibiæ more sparsely ciliate within.

Length $6\frac{1}{2}$ –15, breadth $2\frac{2}{3}$ –6 millim.

Hab. MEXICO (*ex coll. Sturm*², *Mus. Brit.*), Refugio in Durango (*Höge*), Toxpam (*Sallé*¹); GUATEMALA (*Sallé*), Cacao near Trece Aguas (*U.S. Nat. Mus.*), Paraiso (*Champion*), Coban (*Conradt*); NICARAGUA, Chontales (*Janson*); COSTA RICA (*Mus. Brit.*), San José (*Biolley*); PANAMA, Volcan de Chiriqui (*Champion*).

The twenty-five specimens of this insect before me vary enormously in size. It differs from the S.-American *O. lividus*, Gyll., in having the anterior tibiæ unemarginate at the tip, and all of them armed with an acute, rather broad, obliquely truncated, claw at the inner apical angle, the basal joint, too, of the posterior tarsi is less dilated. The posterior tibiæ (fig. 12 b *) are much widened towards the apex. The first ventral

* The outer face of the tibiæ is shown.

segment is unimpressed in both sexes. According to Chevrolat¹ "cette espèce vit d'excréments humains." He mistook the porrect mandibles for part of the rostrum. *O. subparallelus* has long been known in collections under the name of *Mesocordylus immundus*, Er., a Peruvian insect with the elytral interstices "griseo-leprosis." It superficially resembles *M. memnonius* (Fähr.).

Sect. SIPALIDES.

Sipalides vrais, Lacordaire.

MESOCORDYLUS.

Mesocordylus, Lacordaire, Gen. Col. vii. p. 314 (1866).

This genus includes the Tropical-American forms placed under *Sipalus* by Schönherr. Six are known to me from within our limits. They may be separated thus:—

- a. Body depressed above, comparatively broad; rostrum not constricted at the base; elytra opaque, incrustate, rather deeply punctate-striate, the interstices each with one or two rows of closely placed granules down the middle . . . *striatus*, Boh.
- b. Body more elongate, rather convex, subcylindrical.
 - a¹. Rostrum not constricted at the base; elytra finely punctate-striate, the interstices each with a widely scattered row of rather large, rounded, griseous spots; legs very slender. *gracilis*, sp. n.
 - b¹. Rostrum constricted at the base; legs stouter.
 - a². Elytra faintly striate, the interstices with comparatively large, scattered, rounded, griseous or whitish spots, the rest of the surface bare . . . *subulatus*, Germ.
 - b². Elytra uniformly incrustate, finely punctate-striate, the interstices each with a row of small vesiculiform spots *pustulosus*, sp. n.
 - c². Elytra rather deeply punctate-striate, the interstices with numerous minute griseous spots.
 - a³. Rostrum shallowly bisulcate, the griseous spots on the elytra uniseriately arranged laterally *bracteolatus*, Boh.
 - b³. Rostrum not sulcate, the griseous spots on the elytra less numerous and more irregularly arranged *dispersus*, sp. n.

1. *Mesocordylus striatus*. (Tab. VIII. figg. 13, 13 a, ♂.)

Sipalus striatus, Boh. in Schönh. Gen. Curc. iv. p. 805¹.

Mesocordylus striatus, Lacord. Gen. Col. vii. p. 315, nota².

Hab. PANAMA (*Mus. Brit.*; *U.S. Nat. Mus.*).—SOUTH AMERICA, Cayenne¹, Peru.

I have seen three specimens of this species from Panama, all males. It is shorter and more depressed than the allied forms; the prothorax is strongly rounded at the side, and bare, shining, and rather sparsely punctate on the disc; the elytra have deep,

finely punctate striæ, separated by broad interstices, the latter with one or two rows of small, closely placed granules down the middle; the rostrum (σ) is broad for three-fourths of its length, and then abruptly narrowed, and closely punctate to the tip. The surface (the disc of the prothorax excepted) is in great part covered by a thin, natural, opaque, brownish incrustation.

2. *Mesocordylus gracilis*, sp. n. (Tab. VIII. figg. 14, 14 *a*, σ .)

σ . Moderately elongate, narrow, subcylindrical, opaque, piceous, the elytra and legs fusco-castaneous, the punctures with a griseous incrustation. Head closely punctate; rostrum stout, curved, a little shorter than the prothorax, not constricted at the base, unimpressed above, coarsely, confluent punctate to the tip, sharply carinate between the rounded pterygia. Prothorax about as broad as long, obliquely narrowed anteriorly and posteriorly, feebly constricted in front, and sharply margined at the base; closely, confluent punctate, except along the abbreviated slightly raised median line. Scutellum small, flattened. Elytra moderately long, wider than the prothorax, convex, subparallel in their basal half; finely punctate-striate, the interstices broad, flat, each with a row of from 5-9 widely scattered, rather large, rounded, griseo-incrustate foveæ. Legs very slender, the tibiæ fringed with a few short scattered hairs.

Length $5\frac{1}{2}$, breadth $1\frac{7}{8}$ millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

One male, somewhat immature. Less elongate and much smaller than the S.-American *M. papulatus* (Fåhr.) (the type of which I have seen in the Sommer collection), the prothorax shorter, the rostrum sharply carinate anteriorly, the legs very slender. The scattered griseo-incrustate foveæ on the elytra are very conspicuous and appear to be raised at first sight, but less so than in *M. leprosus* (Boh.).

3. *Mesocordylus subulatus*. (Tab. VIII. figg. 15, 15 *a*, σ .)

Calandra subulata, Germ. Ins. Spec. nov. p. 301¹.

Sipalus subulatus, Boh. in Schönh. Gen. Curc. iv. p. 806².

Hab. NICARAGUA (*Sallé*), Chontales (*Belt, Janson*); COSTA RICA, San Carlos (*U.S. Nat. Mus.*).—SOUTH AMERICA, Brazil^{1 2}, Peru.

Nicaraguan and Costa Rican specimens of this species have the scattered, rounded, whitish, asymmetrically arranged spots on the elytra a little larger and not quite so numerous as in most of the South-American examples I have seen. The rostrum is arcuate, constricted at the base, and closely punctate to the tip, the apical portion being much smoother in the female. The elytra are obsoletely striate, the striæ impressed with scattered fine punctures. The tibiæ are feebly ciliate in the male. The length varies from $9\frac{1}{2}$ –18, and the breadth from 3–6 millimetres.

4. *Mesocordylus pustulosus*, sp. n. (Tab. VIII. figg. 16, 16 *a*, σ .)

σ . Elongate, subcylindrical, rather convex, black, coated with a natural, subopaque, pale greyish-brown incrustation, the head only bare and shining. Head sparsely punctate, shallowly foveate between the eyes; rostrum stout, curved, a little shorter than the prothorax, constricted at the base, unimpressed

above, closely, confluent punctate to the tip, the apical portion as wide as the basal. Prothorax longer than broad, rounded at the sides, constricted in front, and sharply margined at the base; very coarsely, irregularly punctate. Scutellum rather large, oval. Elytra elongate, a little wider than the prothorax, subparallel in their basal half; finely punctate-striate, the interstices flat, broad, each with a row of scattered, small, irregularly placed, vesiculiform prominences (those on the first becoming more numerous on the apical declivity) and with some fine uniseriately arranged punctures visible between them. Beneath sparsely punctate; metasternum and first ventral segment broadly and shallowly depressed down the middle. Legs moderately stout, the tibiae fringed with short hairs.

Length 14, breadth $4\frac{1}{2}$ millim.

Hab. NICARAGUA, Chontales (*Belt*).

One male. This species is related to the S.-American *M. sphacelatus* (Boh.) (the type of which I have seen), but it has the vesiculiform prominences on the elytra smaller, more numerous (about 8–12 on each interstice), and somewhat regularly distributed, a less rugose prothorax, &c. The surface is coated with a natural incrustation * much as in *Sphenophorus æqualis*, Gyll.

5. *Mesocordylus bracteolatus*. (Tab. VIII. figg. 17, 17 a, ♀.)

Sipalus bracteolatus, Boh. in Schönh. Gen. Curc. iv. p. 809¹.

♂. Rostrum constricted at the base; the basal portion very coarsely punctate, somewhat flattened, more or less raised or subcarinate down the middle, and shallowly sulcate on each side of this; the apical portion closely punctured. Tibiae sparsely fulvo-ciliate within. First ventral segment more or less depressed down the middle.

♀. Rostrum with the apical portion smoother and a little narrower.

Length $7\frac{1}{4}$ – $19\frac{1}{2}$, breadth $2\frac{2}{5}$ – $6\frac{1}{2}$ millim.

Hab. MEXICO (*Mus. Brit.*; *Truqui*), Toxpan (*Sallé*), Vera Cruz (*coll. Chevrolat*¹), Motzorongo, Amatan, Tumbalá (*Flohr*); BRITISH HONDURAS, Rio Sarstoon (*Blancaneaux*); COSTA RICA, San José, La Uruca (*Biolley*).

Apparently not rare in Mexico. This species is chiefly recognizable by the shallowly bisulcate, subcarinate, basally constricted rostrum, the coarsely punctured prothorax, and the numerous minute griseous spots along each of the elytral interstices, these being uniseriately arranged on the outer part of the disc and often becoming more crowded and biseriate towards the suture. In one very small narrow example from Tumbalá the disc of the prothorax, and also the median portion of the under surface, is comparatively smooth.

6. *Mesocordylus dispersus*, sp. n. (Tab. VIII. figg. 18, 18 a, ♂.)

Extremely like *M. bracteolatus*, but differing as follows:—Rostrum relatively broader, very coarsely, confluent punctate, without trace of sulci in either sex, more or less flattened or depressed behind the middle; elytra with the minute griseous spots not quite so numerous and more irregularly arranged over the whole surface, usually clustered into two rows along the first (sutural) interstice; tibiae more closely fringed with fulvous hairs within in the ♂.

Length $12\frac{1}{5}$ – $25\frac{1}{2}$, breadth 4–8 millim. (♂ ♀.)

* The specimen has been cleaned with caustic potash, which does not remove the incrustation.

Hab. BRITISH HONDURAS, Rio Sarstoon (*Blancaneaux*); NICARAGUA, Chontales (*Belt, Janson*); COSTA RICA, San Carlos (*U.S. Nat. Mus.*); PANAMA (*coll. Pascoe*).—COLOMBIA, Buenaventura (*Rosenberg*); ? PERU.

Numerous examples of this insect have been obtained from Chontales, and it differs constantly from *M. bracteolatus* as stated above, the rostrum in the latter being conspicuously raised or carinate down the middle towards the base in both sexes. The allied *M. rugicollis* and *M. cylindraceus* (Boh.) are described as having the rostrum unconstricted at the base, and *M. cœlomerus*, Chevr., sulcate elytra and nigro-pilose tibiæ.

YUCCABORUS.

Yuccaborus, Leconte, Proc. Am. Phil. Soc. xv. p. 331 (1876); Casey, Ann. N. York Acad. Sci. vi. p. 687 (1892).

This genus, the type of which is *Rhina frontalis*, Lec., is very nearly related to the S.-American *Harpacterus*, Schönh., but differs from it in having the eyes widely separated above, the prothorax truncate at the base, and the scutellum unimpressed. In *Y. lentiginosus*, Casey, the elytra are asymmetrically maculate, much as in *H. quadrisignatus*, Boh.*, except that the whitish spots in the latter are condensed into larger patches below the base and towards the apex.

The four described species are from the Southern United States or Mexico; the type was found under the bark of *Yucca* in the Mojave Desert.

The larva has been figured by Wickham [Journ. New York Ent. Soc. iv. p. 123, t. 5. fig. 123 (1896)].

1. *Yuccaborus lentiginosus*. (Tab. VIII. figg. 19, 19 a, ♂.)

Yuccaborus lentiginosus, Casey, Canad. Ent. xxxvi. p. 323 (1904)¹.

Hab. NORTH AMERICA, Brownsville in Texas¹.—MEXICO, Orizaba (*Sallé*).

There is a single (♂) example of a *Yuccaborus* from Orizaba in the Sallé collection that I am unable to separate from the series of *Y. lentiginosus* (♂ ♀) sent us by Mr. Wickham. The rostrum is shorter and still more strongly asperate, the prothorax has a broader polished space on the middle of the disc, the irregularly-distributed whitish rounded spots surrounding the interstitial punctures on the elytra are a little more scattered, and the first ventral segment is more feebly excavate, than in the male of the Texan insect; but these differences are individual rather than specific.

* To judge from the supposed type of *H. ebeninus*, Boh., in the Sommer collection, it is probable that it will prove to be a discoloured greasy example of *H. quadrisignatus*. An allied undescribed form occurs in Ecuador.

2. *Yuccaborus sharpi*.

Yuccaborus sharpi, Casey, Ann. N. York Acad. Sci. vi. p. 688¹.

Hab. MEXICO, Guerrero (*Baron*¹).

Unknown to me. The species was described from a single specimen, and it is said to differ from *Y. frontalis* in its stouter form, more polished integuments, less prominent humeri, &c. The immaculate elytra separate it from *Y. lentiginosus*.

RHINA.

Rhina, Latreille, Hist. Nat. Crust. et Ins. iii. p. 198 (1802); Schönherr, Gen. Curc. iv. p. 790; Lacordaire, Gen. Col. vii. p. 316.

The American and African species of this genus are very closely allied, and all of them vary enormously in size, much as in certain genera of Brentidæ. The males, as is well known, have a dense brush of fulvous hairs on the rostrum and the anterior legs more or less elongated. *R. barbirostris* is replaced in the Antilles by *R. scrutator* (Oliv.)*, which has the anterior tibiæ ciliate in the male as in the African *R. nigra*†.

1. *Rhina barbirostris*. (Tab. VIII. figg. 20 ♂, 21 ♀, rostrum.)

Curculio barbirostris, Oliv. Ent. v. no. 83, p. 232, t. 4. figg. 37, *a*, *b*¹.

Rhina barbirostris, Latr. Hist. Nat. Crust. et Ins. xi. p. 102²; Fähr. in Schönh. Gen. Curc. iv. p. 792³.

Rhina ebriosa, Fähr. loc. cit. p. 791⁴.

Rhina costalis, Fähr. loc. cit. p. 793⁵.

Rhina affaber, Fähr. loc. cit. p. 794⁶.

Length (excl. rostr.) 13–40, breadth 4–12 millim. (♂ ♀.)

Hab. MEXICO^{4 6} (*Flohr*), Playa Vicente (*Sallé*), Actopan, Jalapa (*Höge*); BRITISH HONDURAS (*Blancaneaux*); GUATEMALA, Pauzos, El Reposo (*Champion*); NICARAGUA, Matagalpa (*Richardson*); PANAMA (*coll. Fry*), Bugaba, Volcan de Chiriqui (*Champion*). —SOUTH AMERICA to Brazil^{1 3 5}, Trinidad.

A common insect in the warmer parts of Central America, but apparently local, to judge from the limited number of localities whence specimens have been obtained. It is extremely variable in size‡, and in the corresponding development of the rostrum, antennæ, and legs in the males. Examples of the same size from Mexico and Brazil agree perfectly *inter se*, and there is no reason whatever for separating the large Mexican examples (*R. ebriosa*) from those from Brazil. *R. affaber* (as already noted by Chevrolat §) and *R. costalis* are small forms of the same species. It is unnecessary to give the full synonymy here, for which Schönherr's work³ must be consulted.

* We have a pair of this species from the Flohr duplicates labelled as from "Mexico," but there must have been some mistake in labelling.

† I am unable to detect any difference between *R. afzelii*, Fähr., and *R. nigra* (Drury), when specimens of the same size are compared.

‡ Cf. Blandford, Proc. Ent. Soc. Lond. 1894, p. xviii.

§ Ann. Soc. Ent. Fr. 1885, p. 112.

The following additional species or varieties of Calandrinæ have been seen from within our limits since the publication of the preceding pages :—

DYNAMIS (p. 79) *.

3. *Dynamis borassi*.

Calandra borassi, Fabr. Syst. Eleuth. ii. p. 430¹.

Rhynchophorus borassi, Gyll. in Schönh. Gen. Curc. iv. p. 818².

Dynamis borassi, Chevr. Ann. Soc. Ent. Fr. 1882, p. 563³.

Hab. PANAMA, Chiriqui (*Trötsch, ex Staudinger*).—SOUTH AMERICA^{1 2}, Cayenne³.

A single example (♀) of this species from Chiriqui is contained amongst some Calandrids recently sent me by Herr A. Bang-Haas. It may be readily known by its shining, polished surface, the obliteration of the outer striæ of the elytra (the five deep sulci being thus very conspicuous), and the long, narrow, carinate exposed portion of the scutellum. In this species the rostrum of the male varies greatly in length, and it is shorter and more slender in the female than in the male. The female has all the tibiæ, and the intermediate femora only, densely fimbriate, a character not mentioned by Gyllenhal.

CACTOPHAGUS (p. 82).

Cactophagus rufocinctus (p. 86).

In the Dresden Museum † there is a *Cactophagus* (♂) from San Carlos, Costa Rica, that must be treated as a variety of *C. rufocinctus*; it is rufous spotted with black, like the Colombian *C. tibialis* (Waterh.), from which it differs in wanting the dense tuft of longer hairs on the intermediate tibiæ in the male. The allied *C. cirratus* is almost equally variable in colour.

METAMASIUS (p. 103).

10 (A). *Metamasius cinnamominus*. (Tab. IX. figg. 1, 1 a, ♂.)

Calandra cinnamomina, Perty, Del. Anim. Art. Bras. p. 82, t. 16. fig. 13 (♀)¹.

Sphenophorus cinnamomeus (sic), Gemm. & Harold, Cat. Col. viii. p. 2647².

Sphenophorus obsoletus, Gyll. in Schönh. Gen. Curc. iv. p. 895³; viii. 2, p. 238⁴.

Metamasius obsoletus, anteà, pp. 103, 112⁵.

Hab. HONDURAS (*ex Staudinger*).—COLOMBIA⁴; GUIANA^{3 4}; BRAZIL¹⁻⁴.

A single male, agreeing exactly with Gyllenhal's type of *S. obsoletus*. It has the rostrum deeply sulcate, setulose, and dilated into a stout, blunt, tooth-like prominence on each side between the points of insertion of the antennæ, beneath, and the posterior tibiæ armed with a small triangular tooth on the inner edge at about the middle.

* Erratum: *D. germari* (p. 80). For "originally described from an introduced example of the same sex found at Boston¹" read "described by Gyllenhal from an introduced example of the same sex found at Boston³."

† Dr. Heller has also sent me a small male of *Homalostylus dentirostris* (anteà, p. 118) for determination; it is from Turrialba, Costa Rica, the types were from Mexico.

APPENDIX : TO THE CURCULIONINÆ.

SINCE the conclusion of Vol. IV. pts. 4 and 5, and of the earlier portion of pt. 7 (pp. 1-78), of this series*, various additional species belonging to the Subfamily Curculioninæ have come to hand, including a representative of the group "Gymnetrina," from Northern Mexico, and several new *Hilipus*, *Anthonomus*, *Cholus*, *Erethistes*, *Cratosomus*, &c., from more southern localities, sufficient to make a short Appendix desirable. Corrections to the synonymy (some of which have already been mentioned in scattered footnotes, &c.), and additional localities for several species (a few of which had been described from single examples), are also noted.

Vol. IV. pt. 4.

HYLOBIINA.

HILIPUS (pp. 7, 715).

Hilipus cruciatus (p. 9). (Tab. IX. fig. 2, var.)

Amongst the specimens of this species in the British Museum there is one from "Mexico" with the white markings on the elytra reduced to three oblique fasciæ and a transverse spot below the shoulder.

Hilipus fenestratus (p. 10).

To the locality given, add:—MEXICO, Colonia (*Flohr, in coll. Fry*).

Hilipus limbatus (p. 11).

To the locality given, add:—MEXICO (*ex coll. Solari*).

We are indebted to Signor Solari for a Mexican representative of this species, described from a single example from Chiriqui. He also has *H. albopictus* from Mexico, which again was described from a single specimen.

* Part 6 is devoted to the Brentidæ, Scolytidæ, and Anthribidæ.

6 (A). **Hilipus trifurcatus**, sp. n. (Tab. VIII. fig. 22, ♂.)

- ♂. Elongate, narrow, shining, the prothorax dull, except along the incomplete smooth median line, black; the rostrum, legs, prothorax, and apex of the elytra clothed with scattered fine, hair-like, white scales, the sides of the prothorax and the tip of the elytra with narrow minute bluish scales intermixed; the elytra each with two dense patches of rather broad, imbricate, white scales on the disc—one extending down the basal third, trifurcate within and extending broadly outwards posteriorly, the other transverse, undulate, and excised behind, at about one-fourth from the apex. Head foveate between the eyes; rostrum stout, feebly curved, somewhat closely punctate to near the tip, and with indications of a smooth, raised median line. Prothorax narrow, longer than broad, gradually narrowed anteriorly, deeply bisinuate at the base; very sparsely, finely punctate, the interspaces alutaceous. Elytra very elongate, one half wider than the prothorax; rather finely seriate-punctate, the interstices flat and subalutaceous. Ventral segments 1 and 2 broadly sulcate down the middle.

Length $15\frac{1}{2}$, breadth 5 millim.

Hab. PANAMA, Chiriqui (*coll. Fry, in Mus. Brit.*).

One specimen. Longer and narrower than *H. hieroglyphicus*; the rostrum much longer; the prothorax relatively narrower and without submarginal vitta; the elytra with a somewhat similarly-shaped, inwardly trifurcate, white streak at the base, the subapical markings reduced to a transverse undulate fascia; the ventral excavation (♂) long and deep.

Hilipus collectus (p. 14). (Tab. IX. fig. 3, var.)

We are indebted to Dr. K. M. Heller for a variety of this insect, from Tucurrique, Costa Rica (*ex coll. Schild-Burgdorf*), with the elytral markings reduced to a few small spots—one at the base, two, placed obliquely, at the sides before the middle, two, also obliquely placed, on the disc towards the apex, and three or four (still smaller) along the sides beyond the middle. This insect (♂) also has the prothorax longitudinally grooved at the middle of the basal margin (? accidental), and it may have to be separated from the Nicaraguan *H. collectus* when further specimens are available for examination.

Hilipus spinipennis (p. 716).

To the locality given, add:—NICARAGUA (*Belt, in coll. Fry*).

One specimen, differing very little from the Costa Rican type.

47 (A). **Hilipus patens**, sp. n. (Tab. VIII. figg. 23, 23 a, ♀.)

- ♀. Oblong-ovate, broad, black, the antennæ, apices of the tibiae, and tarsi ferruginous or obscure ferruginous; above (the granules excepted) thickly clothed with small reddish-brown scales, the elytra each with a very large, elongate-triangular, velvety-brownish-black patch on the outer part of the disc at about the middle, the patch bordered along the inner edge by a pallid line, which shows a tendency to coalesce with a similarly-coloured oblique line running down the sides of the prothorax posteriorly on to the humeri, the inner part of the disc of the elytra also streaked with brownish-black, the scutellum and prothorax with whitish or ochreous scales intermixed, the eyes bordered with a narrow line of pallid scales; the legs and under surface sparsely clothed with long, hair-like, ochreous scales. Head foveate between the eyes, closely punctate; rostrum stout, almost straight, about as long as the head and

prothorax, closely punctate, except down the middle and on the apical portion. Prothorax transverse, rounded at the sides, constricted and much narrowed in front, deeply bisinuate at the base; coarsely, rather closely granulate. Elytra broad, parallel at the base; seriate-punctate, the interstices each with an interrupted series of somewhat closely placed large and small smooth granules. Tibiæ mucronate at the inner apical angle.

Length 14, breadth $6\frac{1}{3}$ millim.

Hab. NICARAGUA, Chontales (*Janson, in coll. Fry*).

One specimen. Closely related to the somewhat widely distributed *H. intensus*, Pasc., but easily separable therefrom by the more elongate, differently-shaped, velvety patch on the elytra, the patch bordered along the inner edge only by a pallid line (the line extending sinuously forwards on to the prothorax), the coarser and closer granulation of the surface, &c.

HILIPINUS (pp. 51, 718).

19. *Hilipinus biannulatus*, sp. n. (Tab. VIII. figg. 24, 24 a, ♀.)

♀. Oblong-ovate, moderately shining, nigro-piceous; the head with a line around the eyes, the prothorax with a narrow, oblique, submarginal vitta on each side, the elytra each with two very large, loop-like, subangular annuli on the disc (the anterior one extending forwards to the base and the other to the apex), some small spots on the seriate punctures, and a sinuous streak along the outer margin towards the apex, and the sides of the body beneath with various streaks and small spots, densely clothed with imbricate ochreous scales; the legs and under surface with small scattered hair-like scales. Rostrum moderately stout, curved, about as long as the head and prothorax, somewhat closely punctate. Prothorax strongly transverse, obliquely narrowing from the base, the latter feebly bisinuate; sparsely granulate and feebly carinate, the interspaces shallowly, minutely punctate. Elytra moderately elongate, broadly produced at the apex, sinuate at the base, the humeri obliquely truncated and projecting a little forwards; seriate-punctate, feebly granulate at the base and apex, the interstices excessively minutely punctate, the punctures each bearing an extremely minute fuscous scale. Tibiæ mucronate at the inner apical angle, the claw arising from about the middle of the apical margin.

Length 12, breadth $4\frac{1}{2}$ millim.

Hab. PANAMA, Chiriqui (*coll. Fry, in Mus. Brit.*).

One specimen. This species superficially resembles *Hilipus areolatus* (except that it has only two large ochreous subangular annuli on each elytron), but differs from it in the mucronate inner apical angle of the tibiæ, the excavate base of the elytra, &c. The rostrum is doubtless bisulcate beneath in the male.

TELYS (p. 61).

Telys bisinuatus (p. 62).

In the male of this species the anterior coxæ are sharply toothed within, a character not noted in the description, the genus thus showing an affinity with *Ischiomastus*, Kirsch (*cf. antea*, p. 1, nota).

ISCHIOMASTUS.

Ischiomastus, Kirsch, Abhandl. Zool. Mus. Dresden, 1888-89, no. 4, p. 27; Faust, Stett. ent. Zeit. 1893, p. 6.

Lixomorpha, Champ. antea, iv. 4, p. 62 (1902).

This correction in the synonymy has already been briefly noted on p. 1 of the present volume.

I. marginatus was omitted from our enumeration of the Hylobiina.

1. *Ischiomastus albomarginatus*.

Lixomorpha albomarginata, Champ. antea, iv. 4, pp. 63, 719.

2. *Ischiomastus marginatus*.

Ischiomastus marginatus, Faust. Stett. ent. Zeit. 1893, p. 10¹.

Hab. COSTA RICA [♂]¹.—COLOMBIA, Cauca Valley [♀]¹.

Dr. Heller has kindly communicated one of the types (the ♀) of this species for examination. It is allied to *I. albomarginatus*.

ANCHONINA.

DIOPTROPHORUS (p. 93).

Amongst some *Dioptraphori* recently sent us by Mr. Wickham, from Tres Marias (Morelos)* and Salazar, Mexico, there is one specimen (from Tres Marias) perhaps referable to *D. ocularis*, the type of which cannot now be found in the "Sommer" collection. It is a little larger and broader than *D. simplex*, and has the prothorax more uneven, more widened forwards, and abruptly constricted anteriorly.

CLEONINA.

LIXUS (p. 101).

15 (A). *Lixus breviculus*, sp. n.

♂. Comparatively short, rather narrow, black, the antennæ (joints 1-3 of the club excepted) and tarsi obscure ferruginous; sparsely clothed with very fine cinereous pubescence. Head and rostrum densely, finely punctate, the latter curved, stout, and a little shorter than the prothorax, the eyes somewhat prominent, the head feebly foveate between them. Prothorax strongly transverse, gradually narrowing from the base; densely, minutely punctate, with numerous coarser punctures intermixed, the disc slightly depressed down the middle at the base and apex. Elytra very little wider than the prothorax, moderately long, rounded at the tip; striate-punctate, the interstices flat, densely punctulate, the scutellar region transversely depressed, the disc also with a shallow rounded foveiform depression at about one-third from the apex. Beneath densely, finely punctate, with a few coarser punctures intermixed; first ventral segment shallowly sulcate down the middle. Legs comparatively slender, the anterior femora unarmed. Wings (apparently) wanting.

Length 8, breadth $2\frac{7}{8}$ millim.

* Mr. Wickham has also sent us an *Anchonus* very nearly related to *A. granulatus* from this locality. It may represent yet another species of the genus.

Hab. MEXICO, Mexico city (*Höge*).

One specimen. Near *L. germari*, but very much smaller and less robust, the anterior femora simply clavate (not angulate as in *L. germari*), the eyes more prominent, the prothorax densely punctate, the elytra more even, with small seriate punctures and flat, closely punctulate interstices.

ILEOMUS (p. 113).

2. *Ileomus extensus*, sp. n. (Tab. VIII. figg. 25, 25 a, ♂.)

♂. Subfusiform, moderately elongate, rather broad, black, the antennæ obscure ferruginous; sparsely cinereo-pubescent, the pubescence clustered into dense patches on the elytra. Head minutely punctate, with a few coarser punctures intermixed, foveate between the eyes; rostrum about as long as the prothorax, feebly curved, moderately stout, very sparsely and finely, the sides more coarsely, punctate. Prothorax transverse, rapidly, arcuately narrowing from near the base; very uneven, the disc with a large, deep, horseshoe-shaped excavation extending to the base, and also closely, finely punctate, with scattered larger punctures intermixed, the lateral portions coarsely varioloso-punctate. Elytra moderately long, wider than the prothorax, strongly caudate at the apex, the scutellar region transversely excavate, the subapical callosities almost obsolete; seriato-punctate, the interstices flat, alutaceous, the spaces covered by the pubescence densely, rugulose punctate. First ventral segment deeply sulcate. Anterior femora only dentate. Wings fully developed.

Length 15, breadth (at shoulders) $5\frac{1}{8}$ millim.

Hab. MEXICO, "Sierra de Durango" (*Höge, ex Solari*).

One specimen, kindly presented by Signor A. Solari. Smaller, narrower, and less robust than *I. distinguendus*, Boh., the rostrum less curved, the prothoracic excavation deeper, the elytra less uneven, caudate at the apex, and with the subapical callosities almost obsolete, the anterior femora only dentate. *I. extensus* forms a connecting-link between *Ileomus* and *Lixus*.

CERATOPINA.

CERATOPUS (p. 123).

5 (A). *Ceratopus maculicollis*, sp. n. (Tab. IX. figg. 4, 4 a, ♂.)

♂. Obovate, somewhat depressed, moderately shining, nigro-piceous, the tip of the rostrum, the antennæ (the club excepted), and the apices of the tarsi ferruginous; thickly clothed with very small dark brown scales, the head, prothorax, scutellum, and legs, and the alternate interstices of the elytra at the base, irregularly streaked or variegated with flavo-cinereous scales. Head and rostrum densely, finely punctate, the latter moderately stout, feebly curved, a little longer than the head and prothorax united, the eyes very large; antennæ inserted near the tip of the rostrum, the club oblong-ovate. Prothorax rather narrow, transverse, the sides arcuately converging anteriorly; densely, finely punctate, with indications of a narrow, raised, median line. Elytra much wider than the prothorax, comparatively short, separately rounded at the apex, flattened on the disc at the base; finely punctate-striate, the interstices feebly convex and densely punctulate. Tibiæ without visible claw at the apex.

Length $3\frac{5}{8}$, breadth $1\frac{9}{16}$ millim.

Hab. NICARAGUA, Managua (*Solari*).

One specimen, kindly presented by its captor. Smaller, less elongate, and more depressed than the allied forms, the elytra comparatively short, the base of the latter and the disc of the prothorax cinereo-variegate, the tibiæ (as in *C. bisignatus*) almost unarmed at the apex.

ERIRRHINA.

SMICRONYX (pp. 129, 722).

Two species of this genus were sent many years ago to Dr. Sharp as from "Northern Sonora" by the late H. K. Morrison. They had not been seen by me when our enumeration of the "Smicronychides" was published, and are apparently referable to *S. fulvus*, Lec., and *S. silaceus*, Casey. An additional form from Nicaragua has been recently communicated by Signor Solari.

1 (A). *Smicronyx latisquamis*, sp. n. (Tab. IX. figg. 5, 5 *a*, *b*.)

Oblong-ovate, piceous; densely clothed with large, broad, rounded, imbricate, pale brown scales (which have a cupreous lustre when viewed in certain lights), with curled, stout, decumbent, white setæ intermixed (fig. 5 *b*); the scales on the under surface also large, rounded, and whitish. Rostrum curved, rather stout, a little longer than the head and prothorax united, closely punctate. Prothorax transverse, rounded at the sides, closely punctate. Elytra much wider than the prothorax, moderately long, subparallel at the base; narrowly punctate-striate, the interstices broad, flat, punctulate, each with about two rows of large scales. Tarsal claws equal in length.

Length $2\frac{1}{10}$ – $2\frac{1}{2}$, breadth $1\frac{1}{10}$ millim.

Hab. NICARAGUA, Lago de Nicaragua (*Solari*).

Three specimens, probably including both sexes. Less elongate than the Mexican *S. tectus*, the scales very large and imbricate, above and beneath, the curled white decumbent setæ conspicuous, the rostrum not nearly so stout.

TERIRES (p. 138).

A second species is provisionally added to this genus, differing from the type in the longer and comparatively slender rostrum and the bisinuate base of the prothorax, but agreeing otherwise with it in general structure.

2. *Terires plurisetosus*, sp. n. (Tab. IX. figg. 6, 6 *a*.)

Oblong-ovate, narrow, feebly shining, rufo-testaceous, the eyes black; thickly clothed with fine, decumbent, hair-like, pallid scales, the elytral interstices each with a regular row of closely placed, coarser, decumbent setiform scales. Head closely punctate; eyes large, strongly transverse, coarsely faceted; rostrum cylindrical, curved, slender, as long as the head and prothorax, very finely punctate, smooth along the median line, the antennæ inserted at the middle. Prothorax much broader than long, obliquely narrowed anteriorly, the sides parallel at the base, the latter feebly bisinuate; closely, very finely punctate.

BIOL. CENTR.-AMER., Coleopt., Vol. IV. Pt. 7, October 1910.

2 BB

Elytra oblong, considerably wider than the prothorax, obsoletely punctate-striate, the interstices flat, alutaceous, each with a row of rather coarse punctures.

Length $2\frac{1}{2}$, breadth 1 millim. (♀ ?)

Hab. GUATEMALA, Panzos in Alta Vera Paz (*Champion*).

One specimen. Slightly narrower than *T. pilosus*, the vestiture entirely decumbent, the setiform scales along the elytral interstices closely placed, the rostrum longer and much more slender, &c.

PSEUDODERELOMUS, gen. nov. (to follow the genus *Phyllotrox*, p. 146).

Mandibles bifid; rostrum much shorter than the prothorax, moderately stout, subcylindrical, feebly arcuate, the scrobes descending to beneath the eyes; eyes prominent, rather large, distant above and beneath; antennæ (fig. 27 *b*) inserted at about the middle of the rostrum, the scape clavate at the apex, the funiculus short and composed of six closely-articulated joints (1 stout, 2-4 small, transverse, 5 and 6 very broad and strongly transverse, forming part of the club), the club large, abrupt, ovate, with the polished basal portion (including joints 5 and 6 of the funiculus) about as long as the pubescent, sensitive, annulate apical portion; prothorax broad, closely fitting to the elytra, the base somewhat rounded at the middle; scutellum small, narrow; elytra bluntly and separately rounded at the apex; pygidium transverse, exposed; prosternum narrowly raised between the subcontiguous anterior coxæ, and with a deep, transverse, arcuate, subapical groove; intermediate and posterior coxæ somewhat widely separated; ventral segments 1 and 2 connate at the middle, 1 about as long as the metasternum, 3 and 4 short, the first suture sinuous, the others straight and deep; metathoracic episterna narrow; legs very short; femora stout; tibiæ straight, gradually widening outwards, unarmed at the inner apical angle, the intermediate and posterior pairs truncate at the apex; tarsi clothed with fine hairs beneath, broad, the anterior pair wider than the others, the third joint strongly bilobed, the claws divergent, simple, small; body subelliptic, almost glabrous.

Type, *P. baridiiformis*.

The single species referred to this genus has the facies of a small Barid, but the mesothoracic epimera do not ascend upwards, and the insect cannot therefore be included amongst the Barina. In general structure it seems to be most nearly related to *Derelomus* and *Phyllotrox* *, differing from both of them in the 6-jointed funiculus (with the last two joints so much widened as to form part of the large club) and the bluntly separately rounded apices of the elytra, the transverse pygidium being thus entirely exposed. The broad abrupt antennal club, the very short, closely articulated funiculus, the short legs, and broad tarsi are characteristic.

1. *Pseudoderelomus baridiiformis*, sp. n. (Tab. VIII. figg. 27, 27 *a*, *b*.)

Rather convex, alutaceous, subopaque, black, the antennæ (the club excepted), and the legs in part, ferruginous.

Head densely punctate; rostrum densely, rugulose punctate, shallowly sulcate down the middle. Prothorax broader than long, rounded at the sides anteriorly, feebly constricted in front; densely punctate, sometimes with a smooth abbreviated median line. Elytra very little wider than the prothorax, rather short, gradually narrowing from the middle to the obtuse, bluntly rounded apex; finely punctate-striate, the interstices flat and faintly uniseriate-punctate. Beneath closely, finely punctate. Anterior tarsi in the ♂ wider than in the ♀ and clothed with longer hairs beneath.

Length $1\frac{7}{8}$ -2, breadth $\frac{9}{10}$ -1 millim. (♂ ♀.)

* Corrigendum: In the remarks on *Phyllotrox* (p. 141, line 23) for "5 and 6" read "6 and 7."

Hab. MEXICO, Toxpan (*Sallé*); BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, San Juan and Tamahu in Alta Vera Paz (*Champion*).

Ten specimens, these having been placed with the Barids when the collections under examination were sorted. The outer joints of the funiculus are so closely articulated that it is difficult to make out the exact number.

GYMNETRINA (to follow ERIRRHINA, p. 147).

Gymnétrides, Lacordaire.

Cionini, Leconte (part.).

The members of this group are easily recognizable by their 5-jointed funiculus and exposed pygidium.

MIARUS.

Miarus, Stephens, Ill. Brit. Ent. iv. p. 15 (1831); Lacordaire, Gen. Col. vii. p. 8; Leconte, Proc. Am. Phil. Soc. xv. p. 221; Casey, Canad. Entom. xlii. p. 142 (April, 1910).

Colonel Casey has recently added four additional American species to this genus, one of which has long remained unidentified in our collection.

1. *Miarus erebus*.

Miarus erebus, Casey, Canad. Entom. xlii. pp. 142, 143¹.

Hab. MEXICO, Ciudad in Durango 8100 feet (*Forrer*), Colonia Garcia, Sierra Madre, Chihuahua 7300 feet (*Townsend*¹).

The two specimens of this insect sent by Forrer agree very well with Casey's description, and with a co-type kindly presented by him. *M. erebus* is recognizable amongst its American allies by the extremely long bristly vestiture intermixed with decumbent hairs. The male has a less polished and rather shorter rostrum than the female and the first two ventral segments distinctly hollowed down the middle.

ANTHONOMINA.

CIONOPSIS (p. 150).

Cionopsis palliatus (p. 151).

To the locality given, add :—PANAMA, Taboga I. (*Champion*).

Four specimens of this species were captured at Taboga Island. They are a good deal smaller than the Guatemalan types.

ANTHONOMUS (pp. 155, 722).

20 (A). *Anthonomus ciliaticollis*, sp. n. (Tab. IX. figg. 7, 7 a, ♀.)

Subovate, narrow, convex, very shining, deep black, the base of the antennæ, and sometimes that of the femora also, ferruginous; the basal margin of the prothorax, the scutellum, prosternum, and anterior coxæ, and the sides of the body beneath, clothed with pure white hair-like scales. Head almost smooth, foveate above the eyes; rostrum rather slender, feebly curved, and about two-thirds the length of the body in the ♀, shorter and more arcuate in the ♂, finely punctate laterally, smooth along the median line and carinate towards the base, the antennæ inserted at (♀) or beyond (♂) the middle. Prothorax transverse, obliquely narrowing from near the base, feebly constricted in front; somewhat closely, finely, uniformly punctate. Elytra much wider than the prothorax, comparatively short, transversely convex, parallel in their basal half; rather coarsely punctate-striate, the interstices moderately convex, smooth, and bare. Femora each with a small acute tooth.

Length $2-2\frac{1}{2}$, breadth $1-1\frac{1}{10}$ millim. (♂ ♀.)

Hab. PANAMA, David, Bugaba (*Champion*).

One female from David and a pair from Bugaba, the last-mentioned having been included by me under *A. mexicanus* (anteà, p. 169). The completely glabrous elytra, the finely punctured prothorax, with a fringe of pure white scales along the basal margin, the more elongate rostrum in the female, and the dark legs, distinguish *A. ciliaticollis* from all the varieties of *A. mexicanus*.

22. *Anthonomus eugenii*.

Anthonomus eugenii, Cano, La Naturaleza, (2) ii. pp. 377-379, t. 17 (1894).

Anthonomus æneotinctus, anteà, iv. 4, pp. 169, 723, t. 10. figg. 5, 5 a (1903).

This insect proves to be the Pepper-weevil of the Southern United States and the "barrenillo" of Mexico. Cano's name *A. eugenii* (as already pointed out by me in the 'Entomological News' for Oct. 1907, p. 366) will have to be used for it. *A. eugenii*, however, is probably an extreme form of the very variable *A. mexicanus*, Boh.

Anthonomus annulipes (p. 175).

A second specimen of this species, in better condition than the Cuernavaca type, has since been detected in our collection. It was found at Cordova by Höge.

Anthonomus sulcipygus (p. 177).

To the localities given, add :—NICARAGUA, Managua (*Solari*).

Anthonomus melanostictus (p. 181). (Tab. IX. figg. 8, 8 a, ♂.)

To the locality given, add :—NICARAGUA, Managua (*Solari*).

We are indebted to Signor A. Solari for a beautifully fresh specimen of this insect, from Managua, described from a single example from David. A figure of the species is now given.

Anthonomus fuscomaculatus (p. 186).

To the locality given, add:—NICARAGUA, Managua (*Solari*).

This species, described from a single example from Tolé, has also been taken by Signor Solari in Nicaragua. The type was somewhat immature.

Anthonomus texanus (p. 187).

Anthonomus pilosus, Dugès, in litt.

Mr. Pierce records having bred an example of this species from the buds of *Sphæralcea angustifolia* (Order Malvaceæ). He states [Proc. U.S. Nat. Mus. xxxiv. pp. 174, 175 (1908)] that the specimens from Guanajuato, Mexico, are blacker, and have a longer first joint to the funiculus, than in his Texan insect. Apparently he was not aware that *A. texanus* had been previously recorded from Guanajuato in this work.

59 (A). **Anthonomus filirostris**, sp. n.

Closely related to *A. tenuirostris* (anteà, p. 187), but differing as follows:—Body rufo-piceous above, the prothorax, scutellar region, under surface, and rostrum darker; the vestiture not so coarse, the white scales condensed into a dense oblong spot behind the scutellum, which is also albo-squamoso; the rostrum more slender—in the ♂ nearly straight, about half the length of the body, feebly striate-punctate, in the ♀ straight, nearly as long as the elytra (as seen in profile), and smooth, the antennæ in the ♂ inserted far beyond, and in the ♀ at, the middle; the legs not so stout, maculate.

Length $2\frac{1}{5}$ – $2\frac{1}{2}$, breadth $1\frac{1}{10}$ – $1\frac{1}{5}$ millim. (♂ ♀.)

Hab. MEXICO (*ex coll. Solari*).

One pair, labelled "Mexico, Rtt.," differing as above stated from the Guatemalan *A. tenuirostris*, the only Central-American species with which the present insect can be compared. The post-scutellar oblong white spot is also visible in some of the examples of *A. tenuirostris* (though it was not noted in the description or shown in the figure); but the more slender rostrum and finer vestiture are sufficiently characteristic of *A. filirostris* *. *A. alboscuteatus* (anteà, p. 172) has a similar scutellar patch, but it does not otherwise resemble *A. tenuirostris* † or *A. filirostris*.

63 (A). **Anthonomus triangularis**, sp. n.

Relatively narrower, larger, and a little more elongate than *A. triangulifer* (p. 188); the rostrum stouter in the ♂; the elytra distinctly longer, less depressed below the base, and with an elongate-triangular scutellar patch, and sometimes a small spot on the disc beyond the middle, black; the posterior tibiæ of the ♂ not dilated on the inner side near the base, and formed as in the ♀.

Length $2\frac{1}{2}$ –3, breadth $1\frac{1}{5}$ – $1\frac{2}{5}$ millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

* Mr. Wickham has sent me a male of yet another allied form (? undescribed) from Brownsville, Texas; but this insect has the fifth ventral segment deeply sulcate down the middle.

† Corrigendum: For length " $2-3\frac{3}{4}$ " read " $3-3\frac{3}{4}$."

Two males and five females. This species was confused by me with *A. triangulifer*, but the subsequent discovery of the male proves it to be distinct. The unarmed posterior tibiae in this sex also distinguish *A. triangularis* from *A. isthmicus*.

66 (A). ***Anthonomus managuensis***, sp. n.

Oblong-ovate, feebly shining, ferruginous, the eyes black, the legs testaceous; rather sparsely, uniformly clothed with small, narrow, hair-like, brownish-white scales, the vestiture denser and whiter beneath. Rostrum moderately slender, feebly curved, much longer than the head and prothorax, opaque, almost bare, closely punctulate, finely carinate along the median line, the antennae inserted just beyond the middle. Prothorax strongly transverse, rounded at the sides anteriorly, feebly constricted in front; densely, finely punctate. Elytra much wider than the prothorax, parallel at the base; rather coarsely punctate-striate, the interstices almost flat and closely punctulate. Anterior and intermediate femora with a rather long, narrow, acute tooth, the posterior pair with a smaller tooth; anterior and intermediate tibiae strongly sinuate within; tarsal claws with a long tooth.

Length $2\frac{1}{2}$, breadth $1\frac{1}{8}$ millim. (♀?)

Hab. NICARAGUA, Santa Ana, Lago Managua (*Solari*).

Three specimens, one of which has been presented to us by Signor Solari. This species is perhaps nearest related to *A. fulvipes*, differing from it in the ferruginous body, the sparse whitish vestiture, the subglabrous, smoother, and more slender rostrum, and the more acutely toothed femora.

66 (B). ***Anthonomus uniseriatus***, sp. n.

Subovate, narrow, shining, ferruginous or testaceous, the eyes, antennal club, and sometimes the apical half of the rostrum, infuscate or black; sparsely clothed with rather long, yellowish, decumbent hairs, those on the elytra uniseriately arranged along each interstice. Rostrum feebly curved, considerably longer than the head and prothorax, moderately slender, distinctly widened outwards, closely punctate and finely carinate, the antennae inserted just beyond the middle. Prothorax transverse, feebly constricted in front, densely punctate. Elytra wider than the prothorax, coarsely punctate-striate, the interstices convex and feebly uniseriate-punctate. Anterior and intermediate femora each with a small tooth; anterior tibiae sinuate within; tarsal claws with a long tooth.

Length $1\frac{5}{8}$ –2, breadth $\frac{4}{5}$ – $\frac{5}{8}$ millim.

Hab. GUATEMALA, San Joaquin in Vera Paz (*Champion*).

Four specimens, probably including both sexes. A small testaceous or ferruginous form, with a rather stout, apically widened rostrum, and a single row of long decumbent hairs down each elytral interstice.

71 (A). ***Anthonomus solarii***, sp. n. (Tab. IX. figg. 9, 9 a, ♀.)

Elliptic, ferruginous, the eyes, antennal club, and under surface (the ventral segments 2–5 excepted) blackish or infuscate, the legs testaceous; densely clothed with small, oblong, pale brownish-ochreous and whitish scales, the former condensed into two broad indeterminate vittae on the disc of the prothorax and some faint markings on the elytra (a large subtriangular patch being sometimes visible beyond the middle), the scales on the under surface white, those on the ventral segments narrower and hair-like. Rostrum rather stout, feebly curved, slightly longer than the head and prothorax, densely punctate and subcarinate, the antennae inserted at a little beyond the middle. Prothorax strongly transverse, rapidly, arcuately narrowing from near the base; densely, finely punctate. Elytra a little wider than the prothorax, finely

punctate-striate, the interstices flat and densely punctulate. Anterior femora with an acute tooth, the other femora obsolete dentate; anterior tibiæ strongly sinuate within; tarsal claws with a long tooth. Length $2-2\frac{2}{5}$, breadth $1-1\frac{1}{8}$ millim. (σ ♀.)

Hab. NICARAGUA, Managua (*Solari*).

Broader and more densely squamose than the Mexican *A. squamans*, the scales of a pale brownish-ochreous colour intermixed with others of a whitish tint. Also very like the Mexican *A. fulvipes*, but differing from it in the less elongate, broader scales, the bivittate prothorax, the more finely punctate-striate elytra, &c. At first sight, *A. solarii* might be mistaken for a *Sibinia* or *Smicronyx*. About a dozen examples of it were captured.

72 (A). *Anthonomus dealbatus*, sp. n.

Elliptic, piceous, the antennæ (the club excepted), and the legs in great part, ferruginous; densely clothed with small, oblong scales, which are mostly brownish-white in colour (and not clustered into definite markings) on the upper surface, those on the under surface white, becoming hair-like on the ventral segments. Rostrum much longer than the head and prothorax, feebly curved, moderately stout, densely punctate, the antennæ inserted at about the middle. Prothorax strongly transverse, gradually, arcuately narrowing from the base; densely, finely punctate. Elytra finely punctate-striate, the interstices flat and densely punctulate. Anterior femora with a small, the intermediate pair with a still smaller, tooth, the posterior pair unarmed; anterior tibiæ strongly sinuate within; tarsal claws with a long tooth.

Length $2\frac{1}{8}$, breadth $1\frac{1}{10}$ millim. (♀?)

Hab. GUATEMALA, San Gerónimo (*Champion*).

One specimen, not in a very good state of preservation. Very near the Nicaraguan *A. solarii*, but with a relatively longer rostrum, the rostrum and ventral surface piceous, the scales on the upper surface almost uniform in colour, and the posterior femora unarmed. In both species the sculpture of the upper surface is almost entirely hidden by the vestiture, and the funiculus is 7-jointed.

PSEUDANTHONOMUS (p. 194).

9 (A). *Pseudanthonomus nanus*.

Anthonomus nanus, Lec. Proc. Am. Phil. Soc. xv. p. 207¹; Dietz, Trans. Am. Ent. Soc. xviii. p. 244 (nec Gyll.)².

Hab. NORTH AMERICA, Texas¹, Arizona², New Mexico², Colorado, Utah.—N. MEXICO, Juarez (*ex coll. Sharp*).

A very small, narrow, albo-squamose form with a 6-jointed funiculus, near *P. cretaceus*. The insect is deceptively like a *Smicronyx*.

11. *Pseudanthonomus crinitus*, sp. n. (Tab. IX. figg. 10, 10 a, ♂.)

Ovate, shining, ferruginous, the prothorax and elytra slightly darker in one specimen; thickly clothed with small, adpressed, brownish-white, hair-like scales intermixed with very long, pallid, erect setæ, the legs

and rostrum also with rather long erect hairs intermixed. Rostrum about as long as the prothorax, feebly curved, closely punctate to near the tip, the antennæ inserted far beyond the middle, the funiculus 6-jointed. Prothorax transverse, densely punctate. Elytra much wider than the prothorax, comparatively short, punctate-striate, the interstices punctulate. Legs short; femora unarmed; tarsal claws with a long tooth.

Length $1\frac{3}{4}$ – $1\frac{1}{2}$, breadth $\frac{9}{10}$ –1 millim. (♂.)

Hab. SALVADOR, San Salvador (*Solari*).

Two specimens, apparently males, one of them presented to us by Signor Solari. They were captured in May 1898. The only allied Central-American form known to me is *P. hispidus* (anteà, p. 198), which has a much longer, arcuate, subglabrous rostrum, more parallel, subgibbous elytra, and longer legs, the vestiture sparser and darker, and the erect setæ much shorter. The sculpture is almost hidden by the close vestiture in the present species.

MACRORHOPTUS (p. 200).

1. *Macrorhoptus sphæralciæ*.

Macrorhoptus estriatus, anteà, iv. 4, p. 200 (nec Leconte) ¹.

Macrorhoptus sphæralciæ, Pierce, Proc. U.S. Nat. Mus. xxxiv. p. 173 (1908) ².

Hab. NORTH AMERICA, Devil's River, Texas ².—MEXICO, Juarez (*Cockerell* ¹), San Pedro Coahuila (*Dr. Palmer*).

M. estriatus was wrongly identified by me, and the Juarez specimen referred to it, and others now before me from Coahuila, doubtless belong to *M. sphæralciæ*, Pierce. They are densely clothed above with elongate pallid scales intermixed with scattered small decumbent curled setæ. The Texan examples were bred from the fruit-capsules of *Sphæralcea angustifolia* *.

TYCHIINA.

THYSANOCNEMIS (p. 203).

4 (A). *Thysanocnemis exclamationis*, sp. n. (Tab. VIII. figg. 26, 26 a, ♀.)

Broad-ovate, piceous, the under surface in part black, the rostrum, antennæ, and legs (the middle of the femora excepted) ferruginous; thickly clothed with very small reddish-brown hair-like scales, the elytra with a faint sinuous, transverse, yellowish, postmedian fascia, a few widely scattered, intermixed, semi-erect, setiform, white scales, and a broad velvety-black sutural stripe (extending from about the basal fourth to near the apex), the latter interrupted at the middle of its length by a tuft of coarser semierect narrow ochreous scales; the under surface sparsely set with decumbent whitish hairs. Head densely, finely punctate; rostrum considerably longer than the head and prothorax, curved, moderately stout, shining, very sparsely punctate, smooth along the middle, carinate at the base. Prothorax strongly transverse, rounded at the sides anteriorly, much narrowed in front; closely punctate, subcarinate down the middle, the interspaces densely minutely punctate. Elytra broad, subtriangular, transversely depressed at the base; with rows of rather coarse punctures placed in almost obsolete striæ (the first,

* This plant is widely distributed in Mexico (cf. Biol. Centr.-Am., Botany, i. p. 113).

second, and third becoming sinuous towards the middle), the interstices densely, rugulosely punctate.

Femora each with a small tooth.

Length 4, breadth 2 millim. (♀.)

Hab. PANAMA, Bugaba (*Champion*).

One specimen, in very fresh condition. Larger and broader than the Guatemalan *T. suturalis*, the rostrum very much longer, the inner elytral striæ pushed out of line by the largely developed, velvety-black, !-shaped, sutural streak.

7 (A). **Thysanocnemis minor**, sp. n. (Tab. IX. figg. 11, 11 a, ♀.)

Subovate, feebly shining, ferruginous, the legs and antennæ testaceous; somewhat thickly clothed with fine hair-like whitish scales, the elytra with a transverse spot near the base and two undulate, transverse fasciæ—one, broad, a little beyond the middle, the other, narrow, near the apex—brown, the interstices each with a line of coarser decumbent setæ, the scutellum with white scales; the vestiture of the under surface coarser, white, dense along the meso- and metasternal side-pieces. Rostrum (♂) feebly curved, rather stout, as long as the prothorax, finely punctate, and carinate, (♀) more curved, slender, nearly as long as the head and prothorax, shining, and very sparsely punctate; the antennæ inserted near the apex in the ♂ and at the middle in the ♀. Prothorax transverse, arcuately narrowed in front, densely punctate, with indications of a short, smooth, median line. Elytra much wider than the prothorax, coarsely punctate-striate, the interstices convex and closely punctulate. Femora without trace of tooth.

Posterior tibiæ without visible apical claw.

Length $1\frac{7}{8}$ –2, breadth $\frac{9}{16}$ millim.

Hab. NICARAGUA, Managua (*Solari*).

Numerous examples, some of which have been presented to us by Signor Solari. This insect is so like an Anthonomid that it might readily be passed over as such; the more approximate eyes and the produced posterior angles of the second ventral segment, however, distinguish it at a glance. *T. minor* is perhaps nearest related to *T. pusillus*, which wants the dark undulate elytral fasciæ. The rostrum is more slender, and the punctures of the elytral striæ are smaller, than in *T. brevis* *.

SIBINIA (p. 208).

Four additional species of this genus, from Nicaragua, have been sent us by Signor A. Solari. A second specimen of *S. tessellata*, described from a single Mexican example, has since been found in our collection, mixed with the Barids: it was taken by myself at Tamahu, Guatemala. Another specimen of *S. rotundata*, from Bugaba, was also overlooked. All these insects have the funiculus 6-jointed, and the elytra separately rounded at the apex, leaving the pygidium more or less exposed.

1 (A). **Sibinia pulcherrima**, sp. n. (Tab. IX. figg. 12, 12 a.)

Subelliptic, nigro-piceous, the antennæ, tip of the rostrum, and apices of the tarsi ferruginous; variegated

* *T. brevis*, Casey, Canad. Entom. xlii. p. 129 (April, 1910), from Nebraska, requires a new name. His genus *Hamaba* (loc. cit. p. 131), type *H. bahamensis*, from the Bahamas, is very like these small *Thysanocnemis*, but differs from them in having a 6-jointed funiculus. We are indebted to him for a co-type of it.

with narrow, elongate, overlapping white, ochreous, and dark brown scales (those on the elytra arranged in about two rows along each interstice and one along each stria), the prothorax with a dense cluster of larger, imbricate white scales in the middle behind (covering the scutellum), and the elytra with two oblong patches of similar scales along the suture—one near the base, indistinct, the other, larger, broader, and sharply defined, beyond the middle; the vestiture of the under surface and legs white and ochreous, the scales on the meso- and metasternal side-pieces larger and pure white. Rostrum arcuate, rather stout, closely punctate, the antennæ inserted far beyond the middle. Prothorax transverse, deeply sinuate at the base, the sides subparallel behind; densely punctate. Elytra much wider than the prothorax, feebly rounded at the sides, somewhat flattened on the disc anteriorly, strongly and separately rounded at the apex; finely punctate-striate, the interstices densely, rugulose punctate.

Length $2\frac{1}{10}$ – $2\frac{1}{8}$, breadth 1 – $1\frac{1}{10}$ millim.

Hab. NICARAGUA, Corinto (*Solari*).

Two specimens, both in such beautiful condition that I have not ventured to remount them for the purpose of examining the under surface. *S. pulcherrima* is shorter and less convex than the Mexican *S. rubescens*, the scales are much smaller and differently coloured, &c. The upper surface is apparently mottled with black, owing to the sparser and darker vestiture of portions of the surface.

6 (A). *Sibinia solariella*, sp. n.

Short ovate, black, the base of the antennæ, and the tarsi in part, ferruginous; somewhat thickly and uniformly clothed with narrow, hair-like, whitish-cinereous scales, which are condensed into a faint streak along the basal portion of the elytral suture, the elytral interstices each with a line of slightly raised setiform scales down the middle; the scales on the under surface larger and wholly white. Rostrum arcuate, a little longer than the prothorax, closely punctate. Prothorax transverse, arcuately narrowing from near the base, densely punctate. Elytra wider than the prothorax, separately rounded at the apex; punctate-striate, the interstices wider than the striae, closely punctate.

Length $1\frac{1}{2}$, breadth $\frac{4}{5}$ – $\frac{5}{8}$ millim.

Hab. NICARAGUA, Managua (*Solari*).

Five specimens. Separable from the allied *S. americana*, Ch., and *S. melina*, Faust, by the conspicuous line of raised setiform scales down each elytral interstice.

6 (B). *Sibinia albidula*, sp. n.

Ovate, narrow, nigro-piceous, the rostrum, antennæ, and legs ferruginous; rather sparsely clothed with fine, hair-like, white scales, the elytral interstices each with a line of conspicuous white setæ. Rostrum about as long as the prothorax, tapering outwards, bare and shining at the tip. Prothorax transverse, narrowing from the base, densely, finely punctate. Elytra wider than the prothorax, separately rounded at the apex; punctate-striate, the interstices about as wide as the striae, densely punctate.

Length $1\frac{2}{5}$, breadth $\frac{3}{4}$ millim.

Hab. NICARAGUA, Corinto (*Solari*).

One specimen. Smaller than *S. solariella*, the vestiture finer, sparser, and wholly white, the prothorax somewhat conical, the legs ferruginous, &c.

7 (A). *Sibinia dissipata*, sp. n. (Tab. IX. figg. 13, 13 a.)

Short ovate, rather narrow, testaceous, the eyes black, the elytra usually with a common, large, triangular, infuscate, scutellar patch; somewhat thickly clothed with narrow, hair-like, yellowish-white scales,

which become white along the basal margin of the prothorax, the elytra with a more or less interrupted sutural stripe of larger imbricate white scales and a line of curled, decumbent, yellowish setæ down each interstice; the scales on the under surface rather large and wholly white. Rostrum arcuate, nearly as long as the head and prothorax, closely punctate. Prothorax transverse, densely, finely punctate. Elytra considerably wider than the prothorax, separately rounded at the apex; punctate-striate, the interstices densely, rugulosely punctate.

Length $1\frac{2}{3}$ – $1\frac{1}{2}$, breadth $\frac{3}{4}$ – $\frac{4}{5}$ millim.

Hab. NICARAGUA, Corinto (*Solari*).

Numerous specimens, three of which have been presented to us by their captor. Near *S. aspersa* and *S. americana*, but almost wholly testaceous (a common triangular scutellar patch excepted), the vestiture not so dense (except along the elytral suture), the elytra with a row of rather stout, curled, yellowish, setiform scales along each interstice and a dense interrupted white sutural stripe.

Sibinia aspersa (p. 211).

Signor Solari has also sent us a specimen of *S. aspersa* from Corinto. The elytra in this insect, when fresh, have a line of inconspicuous raised setiform scales down each interstice, which are not easily seen till the insect is viewed in profile.

MICROTYCHIUS (to follow the genus *Sibinia*, p. 212).

Tychius, subgen. *Microtychius*, Casey, Canad. Entom. xlii. p. 136 (April 1910).

Colonel Casey has recently described numerous N.-American, and two Mexican, representatives of this genus, the type of which is *Tychius setosus*, Lec., all of them having a 6-jointed funiculus and being very different in facies from the typical European *Tychii*. We are indebted to him, or to Mr. Wickham, for specimens of various N.-American forms, such as *M. setosus* (Lec.), and *M. mica*, *sulcatulus*, *simplex*, *variegatus*, *inermis*, and *dulcis*, Casey; and *Sibinia rubescens*, Ch. (antea, p. 209), will probably have to be included in *Microtychius*. We also have an example of *M. variegatus* labelled "N. Sonora."

1. *Microtychius grypus*.

Tychius (Microtychius) grypus, Casey, Canad. Entom. xlii. p. 139¹.

Hab. MEXICO, Rio Balsas in Guerrero (*Wickham*¹).

Unknown to me.

2. *Microtychius errans*.

Tychius (Microtychius) errans, Casey, Canad. Entom. xlii. pp. 141, 142¹.

Hab. MEXICO, Saltillo and Monterey (*Wickham*¹).

A cotype of this species, from Monterey, has been kindly presented to us by its describer.

OTIDOCEPHALINA.

OOPTERINUS (p. 267).

Oopterinus æneopiceus (p. 270).

We are indebted to Signor Solari for a specimen of this species from the "Sierra de Durango" (*Höge*). It was described from a single example from Mexico belonging to the Berlin Museum.

LÆMOSACCINA.

LÆMOSACCUS (p. 281).

4 (A). **Læmosaccus sulcifrons**, sp. n. (Tab. IX. figg. 14, 14 a, ♂.)

♂. Oblong, subopaque, black, the elytra with a large triangular scutellar patch, extending narrowly downwards along the suture, a spot on the shoulder, an oblong patch on the third interstice just beyond the middle, a similar patch on the fifth near the apex, and the apical margin, ferruginous, the antennæ, knees, tibiæ, and tarsi also more or less ferruginous. Head densely punctate, sulcate between the eyes, the latter unemarginate and somewhat widely separated; rostrum short and very stout, densely punctate, the frontal furrow extending down the basal half. Prothorax transversely convex, strongly rounded at the sides, about as wide as the elytra; the surface sharply carinate down the middle, the disc with closely placed, fine, raised, radiating lines, the base, sides, and apex confluent punctate. Elytra moderately long, subparallel, with narrow, finely punctured striæ, the interstices transversely wrinkled, finely granulate, and angularly raised externally. Pygidium coarsely punctured and granulate. Anterior femora with a rather long, curved, blunt tooth, the other femora obsoletely dentate.

Length $3\frac{1}{2}$, breadth $1\frac{1}{2}$ millim.

Hab. MEXICO (*Truqui, in coll. Fry*).

One male. Near *L. hamatus*, but less shining and not so coarsely sculptured, the prothorax with closely placed, raised, radiating, anastomosing lines on the disc, the eyes more widely separated, the sulcus between them extending down the basal half of the rostrum, the anterior femoral tooth narrower and less truncate at the tip.

CHOLINA.

CHOLUS (pp. 291, 724).

1 (A). **Cholus longipennis**, sp. n. (Tab. VIII. figg. 28, 28 a, ♂.)

♂. Elongate-oval, rather narrow, black; the depressed portions of the surface (a broad space along the flanks of the prothorax, and the median portion of the metasternum and abdomen, excepted) somewhat thickly clothed with small, narrow, oval, ochreous scales, those on the prothorax mainly condensed into a broad curved submarginal vitta on each side and an anteriorly abbreviated median stripe, the scales on the elytra clustered into a longitudinal band between each of the raised granulate interstices, the scutellum bare, the legs with scattered whitish hairs. Head rugosely punctate between the eyes; rostrum about as long as the head and prothorax, moderately stout, feebly curved, the basal portion flattened, rugosely punctate, and finely carinate, the apical portion rather sparsely punctured. Prothorax a little broader than long, arcuately narrowing from the base, the latter deeply bisinuate; closely punctate, the disc transversely rugose and subgranulate, slightly depressed down the middle and along the spaces covered by the submarginal vittæ. Elytra very little wider than, and fully two and a half times the length of, the prothorax; seriate-punctate, the interstices raised and each with a row of closely placed smooth granules. Beneath sparsely punctate and pilose down the middle, squamose along the sides, the

metasternum and first two ventral segments broadly sulcate. Anterior coxæ moderately separated. Tibiæ with a sharp claw at the inner and outer apical angles, that at the inner angle of the anterior pair stout and obtuse.

Length $18\frac{1}{2}$, breadth 6 millim.

Hab. PANAMA, Chiriqui (*coll. Fry, in Mus. Brit.*).

One example. Closely related to the Nicaraguan *C. tuberculifer*, but with still more elongate elytra, the interstices of which are raised and conspicuously granulate, and the interspaces between them uniformly ochreo-squamose, and the prosternum without tubercle between the anterior coxæ. The "key" given on p. 291 requires modification to include *C. longipennis*.

19 (A). ***Cholus albovittatus***, sp. n. (Tab. VIII. figg. 29, 29 a, ♂.)

♂. Subenneiform, rather convex, black; the prothorax with three, and the elytra each with two, vittæ on the disc (the central one on the prothorax narrow, the others broad), and both with a continuous stripe along the flanks beneath, densely clothed with broad, imbricate, brownish-white scales, the rest of the depressed portion of the upper surface set with very small brownish-ochreous scales, the head with a curved whitish stripe on each side between the eyes, the under surface with dense patches of broad brownish-white scales, the scales on the abdomen intermixed with pallid hairs, like those on the legs. Head densely punctate; rostrum moderately stout, curved, slightly longer than the head and prothorax, widened at the tip, the basal portion densely punctate and finely carinate, the apical portion more sparsely punctured. Prothorax transverse, deeply bisinuate at the base, rounded at the sides, rapidly narrowing from about the basal third; strongly granulate, the interspaces densely, finely punctate, the spaces covered by the vittæ depressed. Scutellum large, rugosely punctate. Elytra moderately long, a little wider than the prothorax, obliquely narrowing from the rounded humeri; seriate-punctate, the alternate interstices raised and each with a row of closely-placed, smooth granules, the first (sutural) and seventh also with a few smaller scattered granules. Beneath coarsely punctate, granulate along the sides. Ventral segments 1 and 2 broadly sulcate down the middle. Tibiæ with a sharp claw at the inner and outer apical angles.

Length 11, breadth $4\frac{1}{2}$ millim.

Hab. COSTA RICA (*coll. Fry, in Mus. Brit.*).

One specimen. Narrower and more convex than *C. circumnotatus*, the prothorax with three, and the elytra each with two, sharply-defined whitish vittæ on the disc, and both with a whitish continuous stripe along the flanks beneath, the intervening spaces on the upper surface strongly granulate. The sculpture of the vittate portions of the surface is completely hidden by the dense imbricate scales.

Cholus morio (p. 300).

M. Desbrochers des Loges [Ann. Soc. Ent. Belg. 1. p. 356 (1906)] refers this species to *Homalonotus* (Schönh.), Lacord., but on what grounds I know not. Some time ago he communicated a specimen of it from Venezuela for comparison with the type, supposed to be of Mexican origin, but the latter is perhaps wrongly labelled as to locality?

25 (A). ***Cholus tessellatus***, sp. n. (Tab. VIII. figg. 30, 30 a, ♂.)

Oblong-rhomboidal, convex, shining, castaneous, the rostrum, antennæ, and legs sometimes ferruginous (the antennal club and the knees excepted); the depressed portions of the upper surface somewhat thickly clothed with small, pale ochreous, oval scales (thus appearing closely, transversely tessellate), the sides of the body beneath and the prosternum densely clothed with similarly-coloured imbricate scales, the rest of the under surface and the legs with scattered hair-like whitish scales. Head rugosely punctate in front, foveate between the eyes; rostrum arcuate, rather slender, longer than the head and prothorax, in the ♂ subcarinate at the base and somewhat closely punctate thence to about the middle, in the ♀ much smoother. Prothorax strongly transverse, rapidly, arcuately narrowing from the base; closely, rather coarsely granulate, the squamose interspaces finely punctate. Scutellum oblong, closely punctate. Elytra attenuate-cordate, the humeri strongly rounded; seriate-punctate, the interstices rather broad, here and there confluent, and each with a series of flattened, polished granules, the seriate punctures also separated one from another by a smaller smooth granule. Beneath densely punctate along the sides, sparsely so down the middle; ventral segments 1 and 2 hollowed down the middle in the ♂. Tibiæ with a sharp claw at the inner and outer apical angles.

Length $10\frac{1}{2}$ –13, breadth $4\frac{1}{2}$ – $5\frac{1}{2}$ millim. (♂ ♀.)

Hab. PANAMA, Chiriqui (coll. Fry, in Mus. Brit.).

Three specimens. Near *C. lecideosus* and *C. multiguttatus*, but with the sides of the body beneath densely clothed with imbricate pale ochreous scales, the elytra more closely granulate and tessellate with smaller transversely confluent patches of ochreous scales. The prothorax is short and strongly rounded at the sides, the last-mentioned character separating *C. tessellatus* from *C. pallidiventris*, *C. albiventris*, &c.

ERETHISTES (pp. 310, 726).

1 (A). ***Erethistes ochriventris***. (Tab. VIII. figg. 33, 33 a, ♀.)

Erethistes ochriventris, Pasc. Journ. Linn. Soc., Zool. xi. p. 472¹.

♀. Moderately elongate, cuneiform, metallic brassy-green, the antennæ and rostrum black, the legs cæruleous; the head, prothorax, and base of the rostrum sparsely set with small, narrow, whitish scales, the foveiform depressions of the elytra each with a dense transverse cluster of similar scales; the under surface densely clothed with much larger and broader pale ochreous scales, those on the last two ventral segments narrow and hair-like; the legs with scattered whitish hairs. Head closely punctate, feebly foveate between the eyes; rostrum moderately stout, about as long as the head and prothorax, almost straight, the basal portion closely punctate and finely carinate, the apical portion flattened, polished, and very sparsely, obsoletely punctate, the antennæ inserted at the middle. Prothorax broader than long, subconical, rounded at the sides posteriorly, and feebly constricted in front; transversely rugose. Scutellum rather large, finely punctured. Elytra cuneiform, less than twice the length of the prothorax; closely seriate-foveolate, the foveæ subquadrate and here and there transversely confluent, the narrow raised interspaces almost smooth, except along the suture. Beneath densely punctate. Posterior femora extending far beyond the apex of the elytra. Posterior tibiæ with a smooth claw at the outer apical angle.

Length 11, breadth $4\frac{1}{2}$ millim.

Hab. COSTA RICA (coll. Fry, in Mus. Brit.).—COLOMBIA, Santa Marta¹ *.

One specimen. A remarkably distinct form, recognizable at a glance by its regularly cuneiform shape (the sides of the prothorax forming a continuous outline with those

* This locality is in Colombia, not Venezuela as stated.

of the elytra), the metallic brassy-green upper surface, the transversely rugose prothorax, the fasciculate, closely seriato-foveolate elytra, and the dense pale ochreous vestiture of the under surface. The type is somewhat abraded above, and has the elytral interstices disconnected and the subquadrate foveæ arranged in regular series.

2 (B). **Erethistes fasciculosus**, sp. n. (Tab. VIII. fig. 31, ♂.)

♂. Very like *E. triangularis* (antea, pp. 311, 727), but with the prothorax more closely and finely granulate; the irregular, transverse, foveiform, confluent depressions on the elytra much more closely placed, and the dense clusters of scales in the depressions smaller and more numerous; the rostrum less curved; the posterior femora scarcely reaching beyond the apex of the elytra; the scales ochreous, those on the under surface large and oblong, and intermixed with scattered whitish hairs.

Length $14\frac{1}{2}$, breadth $6\frac{1}{4}$ millim.

Hab. PANAMA, Chiriqui (*coll. Fry, in Mus. Brit.*).

One specimen. This is the Panama representative of the Costa Rican *E. triangularis* and it requires a distinctive name. The upper surface is sculptured and clothed as in *E. cyanipes*. The narrower, conical prothorax, subtriangular elytra, prominent humeri, shorter legs, &c., readily separate *E. fasciculosus* from the last-mentioned insect.

2 (c). **Erethistes subviolaceus**, sp. n. (Tab. VIII. fig. 32, ♀.)

♀. Elongate-rhomboidal, rather narrow, convex; black with a subviolaceous or æneous lustre, the antennæ ferruginous at the base, the larger depressions on the elytra each with a rounded or oblong cluster of very small, narrow, whitish scales; the legs and under surface with scattered, minute, hair-like, white scales. Head closely punctate; rostrum curved, rather slender, widened towards the apex, more than half the length of the body, very sparsely, finely punctate. Prothorax transverse, conical, transversely rugose and subgranulate. Elytra oblong-triangular, the rounded humeri almost in line with the sides of the prothorax; coarsely, interruptedly seriato-punctate, the interstices transversely wrinkled and here and there confluent, the outer ones convex. Beneath closely, finely punctate. Posterior femora not extending beyond the apex of the elytra. Tibiæ without definite unguis at the apex.

Length $11\frac{1}{2}$, breadth 5 millim.

Hab. MEXICO (*Truqui, in coll. Fry*).

One specimen. Near *E. triangularis* and *E. fasciculosus*, but with the humeri of the elytra much less prominent and almost in a line with the oblique sides of the prothorax, the scattered fascicles of small white scales on the elytra oblong or rounded, the posterior femora shorter than in the typical members of the genus, the rostrum very elongate, the tibiæ almost unarmed at the tip.

2 (D). **Erethistes truncatus**, sp. n. (Tab. IX. figg. 15, 15 a, ♂.)

♂. Moderately elongate, cuneiform, piceous, the antennæ obscure ferruginous; the head, prothorax, and elytra set with narrow yellowish-white scales, the scales on the prothorax and elytra clustered into transverse or oblique patches in the numerous depressed portions of the surface; the under surface densely clothed with coarser pale ochreous scales, the legs sparsely set with whitish hairs. Head closely punctate, feebly foveate between the eyes; rostrum curved, rather slender, nearly as long as the elytra, sparsely punctate, the apical half almost smooth, the antennæ inserted at the middle. Prothorax

transverse, conical, the sides parallel at the extreme base; transversely rugose. Elytra conical, barely twice the length of, and at the base of the same width as, the prothorax, rather broadly subtruncate at the apex; punctate-striate, the interstices transversely wrinkled, granulate, and here and there confluent. Beneath densely punctate; first ventral segment depressed down the middle. Posterior femora extending beyond the apex of the elytra. Tibiæ without definite uncus at the apex.

Length $9\frac{1}{2}$, breadth $4\frac{1}{4}$ millim.

Hab. HONDURAS (*ex coll. Solari*).

One specimen. Of the same general shape as *E. cyanipes*, but with much shorter, subtruncate elytra (which are scarcely longer than the rostrum); the under surface more densely squamose; the legs more slender and piceous in colour; the tibiæ without definite claw at either the inner or outer apical angle. From *E. triangularis*, *E. fasciculosus*, &c., the present species may be known by the non-prominent humeri, &c.

DIONYNCHUS (p. 313).

Dionynchus parallelogrammus (p. 313).

To the locality given, add:—COSTA RICA, Carrillo (*Biolley*).

I have now seen several specimens of this insect from Chiriqui and one from Costa Rica. M. Desbrochers des Loges [Ann. Soc. Ent. Belg. l. p. 371 (1906)] has recently called attention to the variation in the width of the elytral interstices in this insect.

CRYPTORRHYNCHINA.

ISOTRACHELUS.

Isotrachelus, Faust, Stett. ent. Zeit. 1896, p. 94.

Microcleogonus, Champ. antea, iv. 4, p. 458 (1905).

1. *Isotrachelus tibialis*.

Microcleogonus tibialis, Champ. antea, iv. 4, p. 459, t. 22. figg. 17, 17 a-c; iv. 5, p. 117, nota.

To the localities given, add:—NICARAGUA, Managua (*Solari*).

RHYSSOMATUS (p. 326)*.

18 (A). *Rhyssomatus sexcostatus*, sp. n.

Ovate, convex, shining, piceous, the head, rostrum, anterior margin of the prothorax, and elytra more or less rufescent; sparsely set with minute, narrow, brownish-cinereous scales, which are here and there clustered into small fascicles on the elytra. Head closely punctate, the eyes somewhat narrowly separated; rostrum feebly curved, moderately stout, slightly depressed at the base, about as long as the head and prothorax, closely striato-punctate and also carinate in the ♂, longer and very sparsely, finely punctate from near the base in the ♀. Prothorax strongly transverse, gradually and obliquely narrowing from the base, abruptly constricted towards the apex; closely, rather coarsely punctate, except along a smooth

* St. Vincent, W.I., may be added as a locality for *R. nigerrimus*, Fähr. (p. 337), and *Chalcodermus angularis*, Champ. (p. 319).

abbreviated median line, the punctures here and there transversely confluent on the disc and becoming much coarser towards the sides. Elytra coarsely punctate-striate, the punctures elongate and deeply impressed, the interstices densely, rugosely punctate, 3, 5, and 6 from about the basal fourth, and 7-9 for their entire length, more or less carinate, the ridges on 3 and 5 prominent. Beneath coarsely punctate; fifth ventral segment shallowly foveate in both sexes. Anterior coxæ narrowly separated. Legs densely, rugosely punctate; intermediate and posterior tibiæ angulate on their outer edge towards the apex.

Length $4\frac{1}{4}$ - $5\frac{1}{2}$, breadth $2\frac{1}{8}$ - $2\frac{7}{8}$ millim. (♂ ♀.)

Hab. NICARAGUA, Managua and Corinto (*Solari*).

Three specimens. Nearly related to *R. rufus*, Fähr., but much more rugose, less shining, and sparsely squamose, the prothorax less rapidly narrowed forwards, the ridges on the elytra not so prominent, &c. *R. semicostatus*, Boh., from Colombia, must be an allied smoother form.

GERSTAECKERIA (p. 470) *.

6. *Gerstaeckeria tolucana*, sp. n. (Tab. IX. figg. 16, 16 a.)

Short-ovate, broad, very convex, black, the antennæ (the club excepted), and the tibiæ in part, ferruginous; variegated above with a dense clothing of broad, pale brown and black scales, the latter condensed into two spots on the head, various spots on the prothorax, and numerous scattered markings on the elytra—an interrupted, transverse, arcuate fascia on the disc at about the commencement of the apical declivity and several streaks or transverse spots on the alternate interstices 2, 4, and 6 (the one at the base of 2, and those towards the apex of 2 and 4, oblong); the scales on the legs and under surface pale brown, the legs faintly annulate with whitish. Head and rostrum densely punctate, the latter broad, widened outwards, and about as long as the prothorax. Prothorax short, obliquely narrowed from the middle, constricted in front, the sides somewhat rounded posteriorly; densely, finely punctate, broadly and shallowly trisulcate towards the base (the intervening spaces appearing nodose in profile). Elytra gibbous, rounded at the sides and produced at the apex, at the middle nearly one-half wider than the prothorax; with rows of foveiform punctures placed along shallow striæ, the interstices broad and convex, very densely punctate. Beneath densely punctate; ventral segment 2 shorter than 3 and 4 united, the latter together about as long as 5, the sutures straight. Legs short; femora unarmed.

Length 5, breadth $2\frac{3}{4}$ millim.

Hab. MEXICO, Toluca (*Wickham*).

A single specimen, kindly presented to us by its captor. Recognizable by the very short prothorax and the rotundate, gibbous, nigro-variegate elytra (the black streaks giving a nodulose appearance to the surface when the insect is viewed in profile). The second ventral segment is shorter than the next two united, and the insect is therefore better placed in *Gerstaeckeria* than in *Acalles*.

7. *Gerstaeckeria curvilineata*, sp. n. (Tab. IX. figg. 17, 17 a.)

Closely resembling *G. tolucana*, but abundantly variegate above with larger whitish scales, the blackish-brown scales on the elytra clustered into the following sharply-defined markings—four oblong streaks at the base (the outer one on each elytron shorter and triangular), an oblique, strongly arcuate fascia beyond the middle (extending from the first to the sixth stria, and followed by a curved, slightly broader, whitish band), two elongate streaks on the apical declivity, and a small transverse spot on the outer margin behind the whitish band; the prothorax with a few intermixed blackish scales towards the apex, the

* A second specimen of *G. lacti* (p. 471) has recently been found in the British Museum, from the same locality (Campeche) as the worn type.

sulci very shallow; the head with pale brown and whitish scales only, the latter condensed into a transverse band between the eyes; the elytral interstices broad, convex, and uneven.
Length $4\frac{9}{10}$, breadth $2\frac{2}{3}$ millim.

Hab. MEXICO (*Truqui, in coll. Fry*).

One specimen. Very like *G. toluhana*, but with the prothorax more convex (the sulci almost obsolete), the vestiture of the upper surface partly whitish, and the blackish-brown streaks on the elytra differently placed. The coarse seriate punctures on the latter are not completely covered by the vestiture.

8. *Gerstaeckeria lineatocollis*, sp. n. (Tab. IX. figg. 18, 18 a.)

Short-ovate, very convex, black, the base of the antennæ, the tibiæ, and tarsi rufo-piceous or ferruginous, the entire surface very densely punctate; variegated above with a dense clothing of rather broad, pale brown and blackish scales, the latter clustered into scattered spots on the prothorax and elytra (one at the middle of the fourth interstice the most conspicuous), the prothorax with a line of intermixed whitish and pale brown scales down the middle. Prothorax small, transversely convex, rounded at the sides, constricted in front, densely punctate. Elytra at the base a little wider than the prothorax, moderately rounded at the sides; shallowly striate, the striæ with very coarse closely placed punctures, the interstices feebly convex. Beneath coarsely, densely punctate; ventral segments 2-4 subequal in length, the sutures straight. Femora unarmed.

Length $4\frac{1}{2}$, breadth $2\frac{1}{2}$ millim.

Hab. MEXICO, "Sierra de Durango" (*Höge, ex Solari*).

Narrower and less convex than *G. toluhana*, the prothorax relatively smaller and with a whitish median line, the elytra less rounded at the sides and with flatter interstices, the second ventral segment very little longer than the third. A single worn specimen only has been seen of this species, but it is so different from its nearest known Mexican allies that there could be no difficulty in identifying the insect.

ACALLES (p. 472).

4 (A). *Acalles triseriatus*, sp. n. (Tab. IX. figg. 19, 19 a.)

Subovate, black, the antennæ, tip of the rostrum, and tarsi ferruginous; clothed with a few small, scattered, brown, curled, hair-like scales, the depressions of the surface more or less incrustate. Head and rostrum densely punctate, the latter short, stout, and obsoletely carinate. Prothorax transverse, rounded at the sides, constricted and much narrowed in front, slightly hollowed at the base, shallowly sulcate down the middle; densely, confluent punctate. Elytra oval, produced at the apex, the humeri obtuse; coarsely seriate-punctate, the interstices 3, 5, and 7 each with a row of scattered tuberculiform prominences, that at the base of each of them cariniform and the one on 3 and 5 at the commencement of the apical declivity oblong, large, and prominent. Ventral segments 3 and 4 short. Legs short; femora and tibiæ very stout, the tarsi slender, the intermediate and posterior femora unidentate.

Length $3\frac{1}{2}$, breadth $1\frac{9}{10}$ millim.

Hab. MEXICO (*Truqui, in coll. Fry*).

One specimen. Near *A. cinericius*, but with a transverse, mesially sulcate, confluent punctate prothorax, the tubercles on the elytra differently placed (forming interrupted series on the alternate interstices), the legs very short, the intermediate and posterior femora conspicuously dentate.

9 (A). *Acalles truquii*, sp. n. (Tab. IX. figg. 20, 20 a.)

Oblong-ovate, narrow, black, the antennæ, tip of the rostrum, and tarsi ferruginous; variegated above with narrow, scattered, brown and ochreous scales, the latter becoming much more abundant on a common v-shaped area at the commencement of the apical declivity of the elytra, the head densely clothed with whitish scales on the vertex, the legs subannulate. Head and rostrum densely punctate, the latter a little shorter than the prothorax and subcarinate. Prothorax about as long as broad, constricted and subtubulate in front, the disc depressed anteriorly and down the middle, the sides parallel at the base; coarsely, rugosely, confluent punctate, and with an abbreviated arcuate median carina. Elytra oblong, a little wider than the prothorax, compressed at the sides towards the apex, and with the apical portion somewhat narrowly produced, the humeri angularly projecting in front; nodose and irregularly seriato-foveate, the uneven interstices here and there bare and impunctate, the denser and paler vestiture mainly confined to the oblique area on the apical declivity, the suture granulate at the base. Beneath sparsely foveato-punctate; ventral segments 2 and 5 subequal in length, 2 nearly twice as long as 3 and 4 united, the first suture distinct. Legs moderately long, the femora unarmed.

Length $4\frac{1}{2}$, breadth $1\frac{1}{2}$ millim.

Hab. MEXICO (*Truqui*, in coll. *Fry*).

One specimen, in very clean condition. Near *A. rugulosus*, and easily recognizable by the densely albo-squamose vertex, the uneven, coarsely sculptured, carinate, subquadrate prothorax, and the nodose, foveolate elytra, with a common v-shaped, ochreo-squamose area towards the apex and the humeri angularly projecting in front.

9 (B). *Acalles anchonoides*, sp. n. (Tab. IX. figg. 21, 21 a.)

Oblong-ovate, black, the antennæ and tarsi ferruginous; clothed with a few widely scattered narrow ochreous scales, the depressions of the surface more or less coated with a mud-like incrustation. Head densely, finely punctate; rostrum nearly as long as the prothorax, rugosely punctured at the base, for the rest sparsely, minutely punctate. Prothorax nearly as long as broad, rounded at the sides, constricted and narrowed in front, subtruncate at the base; coarsely, confluent punctate, the disc broadly depressed in the middle, the depression with a sharply-defined arcuate median carina and a faint curved ridge on each side. Elytra oblong-ovate, slightly wider than the prothorax, produced at the apex; nodose and irregularly seriato-foveate, the third interstice with an oblong prominence at the base, the elevations with scattered smooth granules, the humeri subangular. Beneath sparsely foveato-punctate, the ventral segments 3 and 4 very short, 1 and 2 connate. Femora unarmed.

Length $3\frac{3}{4}$ - $3\frac{4}{5}$, breadth $1\frac{3}{8}$ - $1\frac{1}{4}$ millim.

Hab. MEXICO (*Truqui*, in coll. *Fry*).

Two specimens. Less elongate than *A. truquii*; the head without a patch of white scales; the prothorax not so rugose, and with a short, conspicuous carina in the broad median depression; the elytra less compressed at the sides towards the apex, the vestiture very sparse throughout, the humeri not prominent in front. This species has wholly the facies of an *Anchonus*.

17. *Acalles binodulus*, sp. n. (Tab. IX. figg. 22, 22 a.)

Short-ovate, very convex, shining, nigro-piceous, the antennæ and tarsi ferruginous; variegated above with a somewhat dense clothing of lighter and darker brown scales intermixed with scattered, curled, clubbed, decumbent setæ, the tubercle on the third elytral interstice with a cluster of larger adpressed ochreous scales. Head and rostrum densely punctate, the latter broad, rugose and carinate in the ♂, smoother and feebly carinate in the ♀. Prothorax short, rapidly narrowed from about the middle, constricted in

front; closely punctate (the punctures deep and rather coarse), the interspaces minutely punctured. Elytra retundate-ovate, gibbous as seen in profile, rapidly declivous from a little beyond the middle and produced at the apex; seriato-foveate, the interstices rather broad, uneven, punctulate, and faintly granulate, the third with a conspicuous tubercle at the commencement of the apical declivity. Legs short, the femora unarmed.

Length $2\frac{9}{10}$ – $3\frac{1}{10}$, breadth $1\frac{1}{2}$ – $1\frac{4}{5}$ millim. (σ φ .)

Hab. MEXICO, "Sierra de Durango" (*Höge*).

Two specimens, one of which has been presented to us by Signor Solari. Very different from any of the other forms described in this work, and recognizable by the gibbous, closely squamose, finely setose, bituberculate elytra. *A. binodulus* must be placed near *A. tantillus*.

PSEUDOMOPSIS (p. 486).

3 (A). *Pseudomopsis gibbus*, sp. n. (Tab. IX. figg. 23, 23 a.)

Short, very convex, subrhomboidal, black, the antennæ and the tips of the tarsi ferruginous; densely clothed with broad, imbricate, brown scales, the elevations on the prothorax and the basal half of the elytra closely set with erect or suberect black or fuscous scales (the surface thus appearing spotted), the interspaces between the dark markings on the elytra variegated with brownish-ochreous, the scales on the scutellum similarly coloured. Eyes separated by rather more than half the width of the rostrum, the latter stout, curved, flattened towards the tip, and about as long as the prothorax; second joint of the funiculus nearly as long as the first. Prothorax strongly transverse, somewhat conical, abruptly narrowed from the small lateral prominences, which are placed in a line with the two larger, feeble, transverse, nigro-setose elevations on the disc before the middle, the base moderately sinuate, the surface closely punctate. Scutellum small, densely squamose. Elytra much wider than the prothorax, subtriangular, strongly transversely gibbous, abruptly declivous and flattened from about the middle, and with the apices broadly produced; with rows of coarse, scattered punctures placed upon almost obsolete striæ, the interstices broad, 2 and 4 here and there nodose along their basal half, the prominence on 2 at the commencement of the apical declivity the most conspicuous. Legs rather stout; femora each with a very small tooth; tarsal claws small, free.

Length 4, breadth $2\frac{1}{3}$ – $2\frac{1}{2}$ millim.

Hab. MEXICO, "Sierra de Durango" (*Höge, in coll. Solari*).

Two specimens, one of which has been presented to us by Signor Solari. Larger than *P. laticollis*, the elytra still more inflated, relatively broader at the base, with more prominent humeri and larger elevations on the disc. The example selected as the type has the basal half of the elytra sharply spotted and streaked with black. The less sinuate base of the prothorax and the exposed scutellum distinguish *P. gibbus* from *Oxypterus*.

OXYPTERUS (p. 490).

The generic name *Oxypterus* (Faust, 1896) is preoccupied, and it has been changed to *Oxytenopterus* by Berg [Com. Mus. Buenos Aires, i. p. 18 (1898)].

EUXENUS (p. 494).

The generic name *Euxenus* (Faust, 1896) is preoccupied, and it has been changed to *Euxenodes* by Bovie [Ann. Soc. Ent. Belg. li. p. 67 (1907)].

MACRACALLES, gen. nov. (to follow the genus *Dercynus*, p. 502).

Rostrum (seen in profile) about as long as the prothorax, curved, moderately stout, received in repose in the very deep prosternal groove, which is closed behind by the raised horseshoe-shaped mesosternal process, the scrobes short, deep, extending to the lower margin of the eyes, and inferiorly placed; antennæ (fig. 24*b*) inserted near the base of the rostrum, the scape clavate, slender at the base, not longer than the first two joints of the funiculus united, joint 1 of the latter stout, 2-7 very slender, decreasing in length, 2 as long as 1, 5-7 short and subequal, the club abrupt, comparatively stout, acuminate-ovate, with distinct sutures; eyes lateral, large, rounded, almost covered in repose by the ocular lobes of the prothorax; prothorax transverse, produced in front, deeply bisinuate at the base, the narrow median lobe prominent; scutellum small, rounded, flattened; elytra elongate-subquadrate, conjointly produced at the apex, and with the inflexed lower portion almost covering the metathoracic episterna, which are very narrowly exposed posteriorly; ventral segments 2-4 subequal in length; legs short; femora stout, unidentate; tibiæ stout, compressed, rounded externally, almost straight on their inner edge, armed with a sharp claw at the outer apical angle, the inner angle rectangular; tarsi rather slender, the third joint bilobed, pilose beneath, the claws long, slender, and divergent; body elongate, flattened above, nodose, densely clothed with flattened scales intermixed with very short, stout, blunt, suberect setæ.

Type, *M. parallelus*.

The single species from Mexico from which the above characters are taken belongs to the "Tylodides," and it is perhaps nearest related to *Dercynus*. Its chief characters are, the very slender funiculus (joint 1 excepted), the abrupt, acuminate-ovate antennal club, the flattened, rounded scutellum, the elongate, subquadrate elytra, with the inflexed lower margins almost covering the episterna, the toothed femora, and the long, slender, divergent tarsal claws. The general facies is that of a small *Nosoderma* (Tenebrionidæ), and the insect doubtless lives under the bark of trees.

1. *Macracalles parallelus*, sp. n. (Tab. IX. figg. 24, 24*a*, *b*.)

Opaque, black, the antennæ (the club excepted) and the tips of the tarsi ferruginous; densely clothed with brown adpressed scales, the elytra slightly variegated with darker brown, the short intermixed blunt setæ numerous on the legs and more scattered on the dorsal surface of the body. Head and rostrum densely punctate, the latter with the long apical portion flattened, bare, and shining; the joints of the funiculus each with a few projecting bristly hairs. Prothorax abruptly narrowed beyond the middle, the sides crenate, parallel at the base, the short, narrow, apical portion subconical; the surface densely punctate and here and there nodose, the median basal lobe convex. Elytra a little wider than, and nearly two and one-half times as long as, the prothorax, subparallel in their basal half, the shoulders rounded and somewhat prominent; with rows of coarse scattered punctures, the interstices densely punctate, uneven, more or less nodose (except along a broad flattened space down the basal half of the suture), the third, fifth, and seventh subseriato-nodose, the third somewhat raised and with an oblong prominence at the base.

Length $4\frac{5}{8}$, breadth $2\frac{1}{2}$ millim.

Hab. MEXICO, "Sierra de Durango" (*Höge, ex coll. Solari*).

One specimen, presented to us by Signor A. Solari, of Genoa, who has paid much attention to *Acalles* and the allied forms during recent years.

MACROMERUS (pp. 506, 729).

Macromerus succinctus (p. 507).

This common Central-American insect, of which I have now seen specimens from as far south as Peru, is inseparable from *M. numenius*, Er. (Wieg. Archiv, 1847, 1, p. 133), and Chevrolat's name will have to be sunk as a synonym.

HILIPOMIMUS, n. n.

Hilipomorphus, Champ. antea, iv. 4, p. 520 (1905) (nec Desbrochers, 1891).

The name *Hilipomorphus* proves to be preoccupied for an eastern genus of Calandrinæ, and *Hilipomimus* is now substituted for it.

TYLODERMA (p. 527).

Tyloderma æneotinctum (p. 528).

To the localities given, add :—NICARAGUA, San Carlos (*Baker*).

One specimen, kindly presented by its captor.

MÆMACTES (p. 528).

Mæmactes perforatus (p. 529).

To the localities given, add :—COSTA RICA, Puntarenas (*Biolley*).

Two specimens, smaller than the Guatemalan types.

EUBULUS (p. 544).

Eubulus longipes (p. 560).

To the locality given, add :—NICARAGUA, Chontales (*Janson, in coll. Fry*).

Described from a single specimen from Bugaba.

43 (A). **Eubulus cristula**, sp. n. (Tab. IX. figg. 25, 25 *a*, *b*.)

Cælosternus cristula, Faust, in litt.

Subovate, broad, convex, shining, black, the antennæ and apices of the tarsi ferruginous; densely clothed with intermixed reddish-brown and whitish, oval scales, the elytra with a common, transverse, black basal patch (extending outward to the fifth row of punctures), and the third and fifth interstices each with a crest of short, erect, black, setiform scales just below the base, the third interstice also with a

similar crest a little nearer the middle, the prothorax with intermixed darker decumbent scales on the disc, those on the flanks uniformly reddish-brown. Head rugosely punctate, the eyes large and somewhat distant; rostrum about as long as the head and prothorax, curved, moderately stout, rugosely punctate and carinate in its basal half, the apical portion bare and sparsely, finely punctate; antennæ (fig. 25 *b*) inserted at the middle of the rostrum, joints 1 and 2 of the funiculus equal in length, the club elongate, compact, as long as the four preceding joints united. Prothorax strongly transverse, rounded at the sides from near the base, narrow in front; densely, uniformly punctate, and sharply, finely carinate. Scutellum small, oval. Elytra much wider than the prothorax, transversely convex, arcuately narrowing from near the base; punctate-striate, the interstices densely punctate, 3, 5, 7, and 9 very sharply costate, 8 also with a short humeral ridge, the ridge on 3 and 5 undulate and cristate below the base. Beneath densely punctate; first ventral segment with a transverse, interrupted, densely squamose, median ridge. Rostral canal not quite reaching the metasternum. Legs moderately long; femora unidentate; tibiæ curved.

Length 7, breadth 4 millim. (♂?)

Hab. GUATEMALA? (*ex Staudinger*).

One specimen, labelled with the MS. name *Cælosternus cristula*, Fst. This species somewhat resembles *Cælosternus tardipes*, Boh., but it is more nearly related to *Eubulus flavovariegatus* and its allies. *E. cristula* may be known by its long antennal club, basally cristate elytra, unidentate femora, curved tibiæ, &c. The transverse ridge on the first ventral segment is probably a male character.

METRIOPHILOIDES, gen. nov. (to follow the genus *Metoposoma*, p. 583).

Head small; eyes large, rounded, widely separated above, coarsely faceted; rostrum deflexed, slender, arcuate, the antennæ inserted behind the middle, the latter with a long, cylindrical, slender, annulate, pilose club and a closely setose funiculus; prothorax with prominent ocular lobes; scutellum rounded, convex; elytra broad, subtriangular; rostral canal very deep, closed behind, reaching about as far as the hind margin of the intermediate coxæ, and occupying the entire space between them; mesosternum depressed; anterior and intermediate coxæ about equally, the posterior pair widely, separated; ventral segment 2 longer than 3 and 4 united, the first suture arcuate and sharply defined; legs elongate; femora linear, unidentate; tarsi rather slender, the third joint strongly bilobed, the claws simple and divergent; body subovate, rugose, squamose.

Type, *M. barbicornis*.

The type of this genus is related to *Metriophilus* and *Metoposoma*, Faust, but differs from them in having an elongate antennal club, a closely setose funiculus, long, linear femora, a longer rostrum, a depressed mesosternum (the raised u-shaped process being altogether wanting), &c. The distinctly annulate antennal club, depressed mesosternum, &c., separate *Metriophiloides* from *Cylindrocorynus*, Schönh.

1. *Metriophiloides barbicornis*, sp. n. (Tab. IX. figg. 26, 26 *a*, *b*.)

Subopaque, black, the antennæ and the tips of the tarsi ferruginous; variegated above with a somewhat dense clothing of rather broad, ochreous, pale brown, and white scales (the white scales on the elytra here and there clustered into small spots or patches), the elytral interstices and legs also set with intermixed, longer, setiform, decumbent or semierect ochreous scales; the vestiture of the under surface much sparser, the scales on the propleura large and broad. Head densely, rugosely punctate, deeply sulcate between the eyes; rostrum reaching the front of the metasternum, flattened at the apex, shining, closely, finely punctate and tricarinate at the base, almost smooth in its outer half; antennæ

(fig. 26 b) with joints 2-7 of the funiculus decreasing in length, 2 twice as long as 1, all closely set with fine, projecting, bristly hairs, the club a little stouter than, and about as long as, the three outer joints of the funiculus united, 1 and 2 equal in length. Prothorax transverse, rounded at the sides anteriorly, constricted and shortly tubulate in front, densely foveolato-punctate. Elytra about one-third wider than the prothorax, with prominent tumid humeri; coarsely seriato-foveate, the interstices narrow, rugose, and each with a row of scattered granules. Beneath alutaceous, very sparsely punctate. Legs densely squamose, the anterior pair longer than the others.

Length 8, breadth $3\frac{5}{8}$ millim. (♀ ?)

Hab. MEXICO (*Mus. Brit.*).

One specimen, with the head and prothorax somewhat abraded. This insect bears a certain resemblance to *Metriophilus definitus* (Ros.)*.

TYRANNION (p. 593) †.

Tyrannion diffusus (p. 597).

To the localities given, add :—MEXICO (*Höge, ex Solari*).

PHACE (p. 614).

6 (A). *Phace quadriguttata*, sp. n. (Tab. IX. figg. 27, 27 a.)

Obovate, short, shining, black, the antennæ (the club excepted), the tip of the rostrum, and the legs in part, ferruginous; densely clothed with small, rounded, imbricate brown scales, with a few scattered whitish scales intermixed, those on the basal half of the elytra blackish-brown, the second interstice of the latter with a rather long, and the fourth with a shorter, black streak (each preceded by two or three whitish scales) just before the middle; the femora subannulate with white. Head densely punctate; eyes very large, separated by a little less than the width of the rostrum; rostrum arcuate, moderately stout, as long as the head and prothorax, densely punctate, finely carinate down the middle, the apical portion bare. Prothorax strongly transverse, abruptly narrowed just before the apex, the sides feebly rounded, subparallel at the base; densely punctate. Scutellum very small, rounded. Elytra comparatively short, subtruncate at the base, much broader than the prothorax, transversely convex, widening to about the basal third, and obliquely narrowed thence to the apex; with rows of coarse punctures placed along the narrow striæ, the interstices densely punctate and subgranulate, 2 and 4 apparently somewhat swollen towards the middle. Legs short; femora feebly unidentate.

Length $3\frac{2}{3}$, breadth 2 millim. (♂ ?)

Hab. MEXICO, "Sierra de Durango" (*Höge, ex Solari*).

One specimen, in fresh condition. Less elongate than *P. duplex*; the eyes very much larger; the prothorax narrower, feebly rounded at the sides; the elytra shorter, subcordate, less gibbous, the interstices 2 and 4 (not 3 and 5) slightly swollen at the middle of the disc, and at this place streaked with black; the legs shorter; the femora feebly dentate; the coarse scattered setiform scales wanting. The elytral sculpture is almost hidden by the dense vestiture.

* Examples of this insect occur with coarser and sparser elytral vestiture, and the seriate punctures (which each bear an oblong scale) conspicuous.

† Corrigendum: *T. pictilis* (p. 597) was figured under the name *T. pictipennis* on Tab. XXIX. fig. 15.

CRYPTORRHYNCHUS (p. 633).

Cryptorrhynchus lacteicollis (p. 650).

This remarkable species, described from a single specimen from Toxpam, Mexico, has been recorded from Palmerlee, Cochise Co., Arizona, by Mr. C. Schaeffer [Canad. Entom. xxxviii. pp. 343, 344 (1906)], whose examples were obtained by "beating mistletoe growing on walnut."

Vol. IV. pt. 5.

ZYGOPINA.

CRATOSOMUS (p. 2).

Cratosomus angustus (p. 6).

I have now seen a long series of this species (described from an imperfect male), including both sexes, from the original locality, Chiriqui. The female has the densely rugulose, squamulose pygidium (= sixth ventral segment) shorter and more transverse than in the male, and the large fovea on the fifth segment obsolete. The first ventral segment is unimpressed in both sexes.

Cratosomus pulverulentus (p. 7).

Additional examples of this species, from the same collection and locality, have been sent me by Herr A. Bang-Haas. The female has a much shorter pygidium than the male, the excavation on the first ventral segment shallower, and the groove on the fifth reduced to a shallow oblong fovea at the apex. The swollen, subdentiform apices of the elytra are slightly dehiscent at the sutural angle.

7 (A). **Cratosomus insolitus**, sp. n. (Tab. IX. figg. 28, 28 a, ♂.)

Cratosomus insolitus, Faust, in litt.

Very like *C. pulverulentus*—and when fresh in great part covered above (except on the raised or tuberculate portions of the elytral surface) with a crimson (or ferruginous) and pale yellow mealy secretion,—but differing as follows:—The head deeply sulcate (not carinate) between the eyes, the longitudinal groove on the vertex almost obsolete; the eyes less approximate; the prothorax more densely punctate, with minute scattered granules and a faint median carina; the elytra with a smooth rounded tubercle exterior to the very large one near the suture below the base, the prominence below the angularly projecting humeri wanting, the seriate punctures larger and more irregular, the apices produced, not swollen, and conjointly rounded. First ventral segment broadly excavate down the middle in both sexes, the fifth with a large transverse fovea in the ♂ and a shallow longitudinal groove in the ♀; pygidium (= sixth ventral segment) very short in the ♀, much longer in the ♂, densely rugulose and squamulose.

Length $22\frac{1}{2}$ –26, breadth (at shoulders) 10–11 millim. (♂ ♀.)

Hab. PANAMA, Chiriqui (Trötsch).

Described from numerous specimens found by Trötsch in Chiriqui, for some of which we are indebted to Dr. Staudinger's successor, Herr A. Bang-Haas.

BIOL. CENTR.-AMER., Coleopt., Vol. IV. Pt. 7, October 1910.

2 EE

9 (A). *Cratosomus interruptus*, sp. n. (Tab. IX. figg. 29, 29 a, ♀.)

Oblong, shining, black, variegated above with dense, more or less confluent patches of brownish-cinereous, hair-like scales, those on the prothorax nearly enclosing a very large, transverse, oval space on the disc before the middle, and those on the elytra condensed into irregular spots and fasciæ on the depressed portions of their surface. Head closely, finely punctate, broadly sulcate between the eyes, the vertex convex; rostrum about as long as the head and prothorax, arcuate, very stout, flattened, finely punctate, becoming much smoother towards the apex, carinate at the base. Prothorax transverse, rapidly, arcuately narrowing from the base, densely, finely punctate, feebly carinate down the middle. Scutellum oval, sulcate. Elytra long, much wider than the prothorax, gradually narrowing from the somewhat prominent humeri, transversely depressed at and below the base, and before and beyond the middle, the suture also depressed anteriorly; with rows of large, deep, oval foveæ, which become much smaller on the depressed, squamose portions of the surface, the interstices uneven, finely punctate, the third with a large, rounded tubercle near the base. First ventral segment broadly excavate posteriorly. Pygidium narrowly exposed beneath. Femora unidentate.

Length 17, breadth 7 millim. (♀.)

Hab. MEXICO (*ex Staudinger*).

One specimen. Differs from all the forms of the variable *C. punctulatus* in the seriato-foveolate elytra, which want the large flattened tubercles on the alternate interstices (the third having a single large one near the base), the longer rostrum, the more even prothorax, &c. Compared with the nearly allied *C. cuneatus*, the present species may be known by the more uneven, strongly foveolate, less cuneiform elytra, the larger tubercle near the base of their third interstice, and the more transverse prothorax. The elytra have three narrow confluent fasciæ before the middle, and various irregular markings on the apical third, cinereo-squamose.

11. *Cratosomus inæqualis*, sp. n. (Tab. IX. figg. 30, 30 a, ♂.)

♂. Extremely like *C. bidens* (antea, p. 8, t. 1. fig. 16), but differing as follows:—The vestiture of the under surface (especially on the sides of the metasternum) and legs closer and coarser, flavo-cinereous, that of the upper surface very sparse and fine, and not condensed into oblong patches at the bases of the elytra and prothorax; the prothorax without the two very small tubercles on the disc; the elytra with more numerous, coarse, oblong punctures in the striæ, the scattered tubercles on the disc smaller and (except towards the base) oblong in shape, the apices unarmed*; the pygidium broadly exposed ventrally, depressed, longitudinally carinate down the middle at the apex (transversely swollen towards the tip in *C. bidens*, ♂); anterior femora feebly bidentate, the others each with a single rather sharp tooth and the small outer one completely obsolete.

Length 23, breadth 11 millim.

Hab. COSTA RICA (*ex coll. Solari*).

A single male, extremely like *C. bidens*, but differing as stated above. This insect was purchased from M. Donckier and it was doubtless received from the late P. Biolley. It is the Costa Rican representative of *C. bidens*, the latter inhabiting Chiriqui.

* The spiniform prominence at the apex of each elytron in *C. bidens* was not specially mentioned in the description of that species, though indicated in the figure.

PELTOPHORUS (p. 20).

M. Desbrochers des Loges [Ann. Soc. Ent. Belg. liv. p. 126 (April, 1910)] proposes to change the name *Peltophorus*, Schönherr (1845), on account of the name clashing with that of *Peltophora*, Burmeister (1835), to *Opalocetus*. This change is unnecessary, and if a new name is wanted that of *Aptorhynchus*, Desbr. (1891) (type, *Zygops leopardinus* = *P. polymitus*, Boh., var.), is available *.

ZYGOPS (p. 21).

M. Desbrochers (*l. c.* pp. 124, 125) has described, amongst others, two supposed new species of this genus from our region under the names *Z. latevittata* and *Parazygops 8-maculata*; these are synonymous with *Z. trivittata* (p. 30) and *Z. amœnula* (p. 27) respectively *.

HOPLOCOPTURUS (p. 53).

 6 (A). *Hoplocopturus niveiventris*, sp. n. (Tab. IX. figg. 31, 31 a.)

Hoplocopturus sp., anteà, iv. 5, p. 55, nota.

Subelliptic, moderately shining, piceous, the antennæ and the tips of the tarsi ferruginous; the prothorax sparsely clothed with transversely arranged, long, hair-like scales, which are clustered into a faint submarginal vitta on each side; the elytra mottled with smaller, ochreous, fuscous, and white scales, the ochreous scales clustered into a large, irregular, common, X-shaped patch on the disc and various scattered spots, and the white ones into two transverse marks at the sides; the vestiture of the legs and under surface (the mesothoracic epimera excepted) white, the femora fusco-annulate towards the apex. Prothorax short, obliquely narrowed from the base, closely, coarsely punctate, the punctures transversely confluent on the disc, the disc in one specimen with a smooth median line. Elytra much wider than the prothorax, depressed along the suture anteriorly, deeply punctate-striate, the interstices feebly convex and closely punctulate. Meso- and metasternum hollowed between the middle coxæ, the mesosternal depression limited anteriorly by an arcuate ridge, the mesothoracic episterna with a smooth space above the coxæ. Legs elongate; femora unidentate, the posterior pair with a minute tooth placed at some distance exterior to the larger one, the intermediate and posterior pairs carinate externally; anterior knees armed with a short, and the others with a long, spine.

Length 5, breadth $2\frac{1}{2}$ millim.

Hab. NICARAGUA, Chontales (*Janson*).

Two specimens, one (as noted, anteà, p. 55) now without a head. Near *H. nubilus* and *H. sulphureus*, differing from both in the transversely rugose prothorax, the sparser vestiture, which is white beneath, the shining surface, &c. The elytral markings are more irregular than in *H. spinipes*, and ochreous in colour.

* Cf. Champ. Ann. Soc. Ent. Belg. liv. pp. 211, 212 (July 1910).

TACHYGONINA.

TACHYGONUS (p. 131).

4 (A). *Tachygonus quadrisignatus*, sp. n. (Tab. IX. figg. 32, 32 a.)

Rhomboidal, depressed, shining, black, the antennæ, the anterior and intermediate legs, and the third and fourth joints of the posterior tarsi, testaceous; the upper surface and posterior legs thickly set with long, fine, erect, brownish setæ, those at the base of the femora white, the elytra also with a scattered series of imbricate, decumbent, ochreous setæ along the suture, the flanks of the prothorax and the sides of the body beneath clothed with pectinate white scales, the elytra each with two small matted tufts of similar scales—one, oblique, near the suture at about one-third from the base, the other, oblong, on the fifth interstice beyond the middle; the anterior and intermediate legs with long pallid hairs and whitish scales. Prothorax small, transverse, subconical; somewhat closely punctate, except along the smooth median space. Elytra broad, transversely cordate, coarsely seriate-punctate, the interstices narrow, sparsely punctate. Posterior femora elongate, armed with four long (two on each side of the shallow groove beneath) and several smaller teeth. Posterior tibiæ arcuate, moderately stout, sharply toothed at the inner apical angle.

Length $2\frac{1}{2}$, breadth $1\frac{3}{4}$ millim.

Hab. MEXICO, "Sierra de Durango" (*Höge, ex coll. Solari*).

One specimen. Near *T. semirufus*, but larger and differently coloured; the posterior femora less elongate and armed with four long teeth (placed in two pairs on each edge); the posterior tibiæ sharply toothed at the inner apical angle; the elytra less transverse, each with two small, oblique, oblong fascicles of pectinate white scales, and the imbricate setæ along the suture much longer. The prothorax is without tufts of erect hair on the disc. No reliance can be placed on the locality quoted, the insect being probably from the State of Vera Cruz.

BARINA.

PANTOTELES (p. 181).

4 (A). *Pantoteles carinicollis*, sp. n. (Tab. IX. figg. 33, 33 a, ♂.)

♂. Elongate, piceous, densely clothed with small narrow flavo-cinereous scales, these becoming a little larger and whiter on the under surface, the elytra with a few intermixed fuscous scales on two transverse spaces on the disc. Head densely, the rostrum very sparsely and finely, punctate, the latter slender and about as long as the prothorax. Prothorax slightly broader than long, gradually narrowing from the base and abruptly constricted at some distance before the apex, the base itself deeply bisinuate; densely, finely punctate, and with an incomplete, slender, polished, median carina. Scutellum large, strongly transverse. Elytra moderately elongate, considerably wider than the prothorax, transversely depressed below the base, gradually and obliquely narrowing from the rather prominent humeri; very finely punctate-striate, the interstices flat, densely, finely punctate. Legs elongate, the anterior pair longer than the others; tibiæ ciliate on the inner edge towards the apex; anterior tarsi thickly, the others more sparsely, set with long, projecting, bristly, blackish hairs, the anterior pair elongated and with the basal joint about as long as 2 and 3 united.

Length $6\frac{1}{2}$, breadth $2\frac{2}{3}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

One male, in very fresh condition. Closely allied to *P. tenuirostris*, Boh., but differing from that insect in its more elongate form, the almost uniform vestiture (the scattered fuscous scales on the median third of the disc of the elytra being much fewer in number), the less transverse, finely carinate prothorax, the longer elytra, and the elongated strongly nigro-setose anterior tarsi of the male.

GERÆUS (pp. 260, 488).

7 (A). *Geræus euryonyx*, sp. n.

Centrinus senilis, Casey, Ann. N. York Acad. Sci. vi. pp. 576, 589 (nec Gyll.).

Geræus senilis, anteà, iv. 5, p. 265 (part.).

Signor Solari has recently sent me for examination a male and female of a *Geræus*, found by Höge in Mexico (?Sierra de Durango), agreeing with Colonel Casey's description of *Centrinus senilis*, which was based on a single (♀) example from Arizona. These specimens have the tarsal claws sulcate beneath and broader than in Gyllenhal's species, the rostrum less curved (especially in the female), and the elytra less attenuate posteriorly. The form with the broader tarsal claws, from Arizona and Mexico, therefore requires a new specific name; it will probably have to be removed from *Geræus*. The single male seen has moderately long prosternal spines.

Vol. IV. pt. 7.

COSSONINA.

PSEUDOPENTARTHURUM (p. 14).

Mr. E. A. Schwarz, of the U.S. Nat. Mus., has sent me numerous representatives of this genus from Tampico for examination, one of which is described below. The others are extremely variable *inter se*; and it is difficult to say whether they belong to one or two inconstant forms or to several species; they seem to connect *P. depressifrons* and *P. foveifrons* (anteà, pp. 18, 19), with neither of which they absolutely agree.

6 (A). *Pseudopentarthrum caudatum*, sp. n. (Tab. IX. fig. 34.)

Narrow, conico-cylindric, convex, shining; nigro-piceous or black, the antennæ, tibiæ, tarsi, and the explanate apical margin of the elytra, more or less ferruginous. Head unimpressed, very sparsely punctate; rostrum extremely short, broad, sparsely punctate, transversely depressed at the apex. Prothorax slightly broader than long, constricted and much narrowed anteriorly, closely punctate. Elytra very little broader than the prothorax, perceptibly widening posteriorly, the outer margin with a blunt tooth-like projection towards the apex, and the apical margin obliquely explanate from a little beyond this to the slightly dehiscent sutural angle (the margins of the elytra thus appearing narrowly excised before the tip); rather coarsely punctate-striate, the interstices flat, finely uniseriate-punctate.

Length $1\frac{1}{2}$ – $1\frac{3}{4}$, breadth $\frac{1}{2}$ – $\frac{2}{3}$ millim.

Hab. MEXICO, Tampico in Tamaulipas (*Schwarz, in U.S. Nat. Mus.*).

Two examples (one of which has been presented to us), found on Dec. 21st. A very small, remarkably distinct form, with the elytra explanate at the apex somewhat as in *Pentarthrum apicale*, Broun, and with a blunt tooth-like prominence on the outer margin near the tip. *P. caudatum* is related to *P. phlæophagoides*, Woll.

INDEX.

[Names in small capitals refer to Families, &c.; those in roman type to the chief reference to each species included in the work; those in italics to species incidentally mentioned, synonyms, &c.]

	Page		Page		Page
ACALLES	200	<i>Anthonomus fulvipes</i>	188, 189	Cactophagus ciliatus.....	85
<i>Acalles</i>	199, 204	— <i>fuscumaculatus</i>	187	— <i>ciliatus</i>	82
— <i>anchonoides</i>	201	— <i>isthmicus</i>	188	— <i>cirratus</i>	87
— <i>binodulus</i>	201	— <i>managuensis</i>	188	— <i>cirratus</i>	83, 177
— <i>binodulus</i>	202	— <i>melanostictus</i>	186	— <i>fahræi</i>	83
— <i>cinericius</i>	200	— <i>mexicanus</i>	186	— <i>fahræi</i>	82, 84
— <i>rugulosus</i>	201	— <i>nanus</i>	189	— <i>miniatopunctatus</i>	93
— <i>tantillus</i>	202	— <i>pilosus</i>	187	— <i>nawradi</i>	123
— <i>triseriatus</i>	200	— <i>solarii</i>	188	— <i>oblique fasciatus</i>	84
— <i>truquii</i>	201	— <i>solarii</i>	189	— <i>pulcherrimus</i>	88
<i>Acampiti</i>	1	— <i>squamans</i>	189	— <i>pulcherrimus</i>	83, 95
ACAMPTINA	1	— <i>eulcipygus</i>	186	— <i>quadripunctatus</i>	131
<i>Acamptoides</i>	1	— <i>tenuirostris</i>	187	— <i>rufocinctus</i>	86, 177
ACAMPTOPSIS	2	— <i>texanus</i>	187	— <i>rufocinctus</i>	83, 87
<i>Acamptopsis</i>	1	— <i>triangularis</i>	187	— <i>rufomaculatus</i>	86
— <i>cubanus</i>	2	— <i>triangularis</i>	188	— <i>rufomaculatus</i>	83
— <i>encaustus</i>	2	— <i>triangulifer</i>	187, 188	— <i>sierrakowskyi</i>	87
<i>Acampus</i>	1, 2, 3	— <i>uniseriatus</i>	188	— <i>sierrakowskyi</i>	83
— <i>echinus</i>	3	<i>Apatorhynchus</i>	209	— <i>spinolæ</i>	84
— <i>rigidus</i>	3	<i>Apotrepus</i>	21	— <i>spinolæ</i>	82, 83, 85, 103
ÆTHES	100			— —, var. <i>validus</i>	82
— <i>epinicolis</i>	100	BARINA	210	— <i>stigmaticollis</i>	123
<i>Allomimus</i>	30, 31, 32	<i>Borophlæus</i>	42, 43, 62	— —, var. <i>cuneatus</i>	124
— <i>dubius</i>	30, 31, 35, 36	— <i>minor</i>	48, 49	— <i>striatoforatus</i>	83
— <i>politus</i>	35	— <i>murrayi</i>	47	— <i>striatoforatus</i>	82, 100
<i>Ambates</i>	96	— <i>puncticollis</i>	49	— <i>subnilens</i>	84
ANCHONINA	181	<i>Brachylemnus</i>	76	— <i>tibialis</i>	86, 88, 177
<i>Anchonus</i>	8, 10, 181, 201			— <i>validirostris</i>	85
— <i>granulatus</i>	181	CACTOPHAGOIDES	89	— <i>validirostris</i>	82, 110
ANTHONOMINA	185	<i>Cactophagoides</i>	90	— <i>validus</i>	84
ANTHONOMUS	186	— <i>gibberosus</i>	90	CALANDRA	168
<i>Anthonomus</i>	178	— <i>verrucosus</i>	89	<i>Calandra</i>	167
— <i>aneotinctus</i>	186	— <i>verrucosus</i>	90	— <i>albipunctata</i>	99
— <i>alboscuteclatus</i>	187	CACTOPHAGUS	82, 177	— <i>aurifasciata</i>	90, 96
— <i>annulipes</i>	186	<i>Cactophagus</i> ..	79, 90, 91, 103, 153	— <i>bifasciata</i>	84
— <i>ciliaticollis</i>	186	— <i>auriculatus</i>	127	— <i>borasi</i>	79, 177
— <i>dealbatus</i>	189	— <i>bifasciatus</i>	85	— <i>cariosa</i>	158
— <i>eugenii</i>	186			— <i>cinnamomina</i>	177
— <i>filirostris</i>	187			— <i>crenatosulcata</i>	171

	Page		Page		Page
<i>Calandra cribraria</i>	149	<i>Caulophilus veræcrucis</i>	41	<i>Cossonus carinifer</i>	50
— <i>dimidiata</i>	105	— <i>veræcrucis</i>	40	— <i>catolethroides</i>	71
— <i>fasciata</i>	109	<i>Centrinus senilis</i>	211	— <i>catolethroides</i>	42
— <i>germari</i>	80	CERATOPINA	182	— <i>cavirostris</i>	51
— <i>granaria</i>	168	CERATOPUS	182	— <i>cavirostris</i>	52
— <i>larvalis</i>	158	— <i>bisignatus</i>	183	— <i>circumfusus</i>	60
— <i>linearis</i>	169	— <i>maculicollis</i>	182	— <i>concinus</i>	62
— <i>mexicana</i>	170	<i>Chalcodermus angularis</i>	198	— <i>conicirostris</i>	41
— <i>mexicana</i>	168	<i>Chærorrhinus</i>	10	— <i>convexicollis</i>	55
— <i>oryzæ</i>	169	— <i>squalidus</i>	4	— <i>convexicollis</i>	66
— <i>punctata</i>	137	CHÆRORRHYNCHUS	3	— <i>convexirostris</i>	72
— <i>5-punctata</i>	149	<i>Chærorrhynchus</i>	1, 2	— <i>convexirostris</i>	42
— <i>rugicollis</i>	169	— <i>tenuitarsis</i>	4	— <i>convexiusculus</i>	62
— <i>sanguinolenta</i>	91	CHOLINA	194	— <i>convexiusculus</i>	63, 68
— <i>sericea</i>	101, 103, 105	CHOLUS	194	— <i>corticalis</i>	54
— <i>setulosa</i>	169	<i>Cholus</i>	178	— <i>corticalis</i>	55
— <i>setulosa</i>	170	— <i>albiventris</i>	196	— <i>corticola</i>	48
— <i>subulata</i>	173	— <i>albovittatus</i>	195	— <i>corticola</i>	47, 50
— <i>amarindi</i>	169	— <i>circumnotatus</i>	195	— <i>crenatus</i>	47, 48, 50
— <i>13-punctata</i>	149	— <i>lecideosus</i>	196	— <i>curvatostratus</i>	64
— <i>zea-mais</i>	169	— <i>longipennis</i>	194	— <i>curvatus</i>	56
<i>Calandridæ</i>	171	— <i>longipennis</i>	195	— <i>cylindripennis</i>	44
CALANDRINA	167	— <i>morio</i>	195	— <i>deplanatus</i>	52
CALANDRINÆ	79	— <i>multiguttatus</i>	196	— <i>depressicollis</i>	46
CALYCIFORUS	77	— <i>pallidiventris</i>	196	— <i>depressicollis</i>	49, 63
<i>Calyciforus</i>	76, 78	— <i>tessellatus</i>	196	— <i>depressus</i>	41, 42
— <i>erosus</i>	77	— <i>tuberculifer</i>	195	— <i>dubius</i>	30
— <i>excavatus</i>	77	<i>Cionini</i>	185	— <i>duplicatus</i>	67
— <i>inæqualis</i>	77	CIONOPSIS	185	— <i>duplicatus</i>	63
CARPHONOTUS	39	— <i>palliat</i>	185	— <i>euryaspis</i>	56
<i>Carphonotus</i>	31	CLEONINA	181	— <i>euryaspis</i>	57
— <i>ochreipilis</i>	39	<i>Cælosternus cristula</i>	204, 205	— <i>evanescens</i>	68
— <i>testaceus</i>	39	— <i>tardipes</i>	205	— <i>evanescens</i>	66, 69
CATOLETHRUS	24	<i>Coptus</i>	13	— <i>exaratus</i>	62
<i>Catolethrus</i>	27	<i>Cordyle striatus</i>	169	— <i>exaratus</i>	49, 61, 63, 67, 68
— <i>basalis</i>	26	COSSONIDES	22	— <i>falli</i>	55
— <i>ebeninus</i>	26	COSSONINA	7, 211	— <i>ferrugineus</i>	42
— <i>ebeninus</i>	25	<i>Cossonini</i>	22	— <i>flavovittatus</i>	63
— <i>fallax</i>	26	COSSONUS	42	— <i>fossatus</i>	53
— <i>fallax</i>	24, 25, 27	<i>Cossonus</i>	41, 46, 48, 51, 72	— <i>foveatus</i>	65
— <i>fulvolimbatus</i>	25	— <i>abscissus</i>	73	— <i>foveatus</i>	56, 66, 67, 69
— <i>interstitialis</i>	26	— <i>affaber</i>	59	— <i>guatemaltecus</i>	49
— <i>læviusculus</i>	24, 27	— <i>ambigenus</i>	57	— <i>guatemaltecus</i>	50
— <i>longulus</i>	25	— <i>ambiguus</i>	57	— <i>guldungi</i>	55, 56
— <i>longulus</i>	24, 26, 27, 72	— <i>antiquus</i>	64	— <i>hamiltoni</i>	60
— <i>nasalis</i>	24, 26, 27	— <i>aterrimus</i>	61	— <i>hepburni</i>	48
— <i>palmeus</i>	14	— <i>bicolor</i>	59	— <i>hubbardi</i>	72
CAULOPHILUS	39	— <i>bicolor</i>	60	— <i>illigeri</i>	68
<i>Caulophilus</i>	37	— <i>bifoveatus</i>	65	— <i>impressifrons</i>	48, 50, 63
— <i>costatus</i>	40	— <i>bifoveatus</i>	66	— <i>impressus</i>	63
— <i>costatus</i>	39, 41	— <i>bigeminatus</i>	69	— <i>impressus</i>	49, 62
— <i>latinasus</i>	40	— <i>bisulcatus</i>	52	— <i>irregularis</i>	66
— <i>latinasus</i>	39, 41	— <i>bivittatus</i>	70	— <i>latipennis</i>	58
— <i>sculpturatus</i>	40	— <i>bivittatus</i>	64	— <i>latirostris</i>	47
— <i>sericatus</i>	41	— <i>bulbirostris</i>	54	— <i>latirostris</i>	48
— <i>sericatus</i>	38, 40	— <i>caualiculatus</i>	68	— <i>latus</i>	59

INDEX.

215

	Page		Page		Page
<i>Cossonus latus</i>	42, 43, 54, 72	CRATOSOMUS.....	207	<i>Dynamis peropacus</i>	80
— <i>lebasii</i>	56, 65	<i>Cratosomus</i>	178	— <i>politus</i>	79
— <i>ligniperdus</i>	67	— <i>augustus</i>	207		
— <i>ligniperdus</i>	68, 69	— <i>bidens</i>	208	ERETHISTES	196
— <i>mactatus</i>	69	— <i>cuneatus</i>	208	<i>Erethistes</i>	178
— <i>marcidus</i>	71	— <i>inæqualis</i>	208	— <i>cyanipes</i>	197, 198
— <i>marcidus</i>	43	— <i>insolitus</i>	207	— <i>fasciculosus</i>	197
— <i>mexicanus</i>	66	— <i>interruptus</i>	203	— <i>fasciculosus</i>	198
— <i>micraspis</i>	57	— <i>pulverulentus</i>	207	— <i>ochriventris</i>	196
— <i>micraspis</i>	43	— <i>punctulatus</i>	208	— <i>subviolaceus</i>	197
— <i>minor</i>	47	<i>Crepidotus</i>	167	— <i>triangularis</i>	197, 198
— <i>multiforus</i>	47	<i>Cryptorhynchini</i>	1	— <i>truncatus</i>	197
— <i>nitidicollis</i>	69	CRYPTORRHYNCHINA	198	ERIRRHINA	183
— <i>ocularis</i>	67	CRYPTORRHYNCHUS.....	207	EUBULUS	204
— <i>parvicollis</i>	61	— <i>lacteicollis</i>	207	— <i>cristula</i>	204
— <i>parvicollis</i>	58	<i>Curculio barbirostris</i>	176	— <i>cristula</i>	205
— <i>perfidiosus</i>	56	— <i>canaliculatus</i>	68	— <i>flavovariegatus</i>	205
— <i>perfidiosus</i>	57, 61, 65	— <i>cribrarius</i>	149	— <i>longipes</i>	204
— <i>picipennis</i>	40	— <i>fasciatus</i>	109	EUCACTOPHAGUS	96
— <i>pinguis</i>	40	— <i>granarius</i>	168	<i>Eucactophagus</i>	90
— <i>piniphilus</i>	47, 51, 59	— <i>leptocerus</i>	149	— <i>aurocinctus</i>	99
— <i>planirostris</i>	53	— <i>obscurus</i>	149	— <i>aurocinctus</i>	96, 97
— <i>planus</i>	52	— <i>oryzæ</i>	169	— <i>aurofasciatus</i>	98
— <i>puncticeps</i>	45	— <i>palmarum</i>	81	— <i>carinipyga</i>	98
— <i>puncticollis</i>	46	— <i>14-punctatus</i>	149	— <i>carinipyga</i>	96, 99
— <i>puncticollis</i>	42, 43, 49, 72	— <i>sanguinolentus</i>	90, 91	— <i>duplocinctus</i>	97
— <i>punctifrons</i>	66	— <i>13-punctatus</i>	119, 149	— <i>duplocinctus</i>	92, 96
— <i>purulensis</i>	62	CURCULIONINÆ	1, 178	— <i>graphipterus</i>	98
— <i>purulensis</i>	46, 63	<i>Cylindrocorynus</i>	205	— <i>graphipterus</i>	96, 100
— <i>reticulatus</i>	54			— <i>orizabensis</i>	97
— <i>rufescens</i>	62	DENDROCTONOMORPHUS	76	— <i>orizabensis</i>	96, 98, 113
— <i>rufonotatus</i>	57	— <i>brevis</i>	76	— <i>pruinosis</i>	99
— <i>rufonotatus</i>	61	— <i>parallelus</i>	76	— <i>pruinosis</i>	97
— <i>rugosus</i>	45	<i>Dercynus</i>	203	<i>Eucoptus</i>	27
— <i>sargi</i>	58	<i>Dereionus</i>	5, 7, 184	<i>Eugnoristus</i>	167
— <i>scrobicollis</i>	69	<i>Dicadimorpha</i>	13, 14	<i>Eutornus littoralis</i>	73
— <i>scrobiculatostratus</i>	55	DIONYCHUS	198	<i>Euxenodes</i>	203
— <i>scrobiculatostratus</i>	56, 57,	— <i>parallelogrammus</i>	198	EUXENUS	203
	61, 65	DIOPHTOPHORUS	181		
— <i>segnis</i>	64	<i>Diophtophorus</i>	10	GERÆUS.....	211
— <i>semirufus</i>	53	— <i>ocularis</i>	181	— <i>euryonyx</i>	211
— <i>silbermanni</i>	51	— <i>simplex</i>	181	— <i>senilis</i>	211
— <i>spathula</i>	72	<i>Disodontogenus wollastoni</i>	89	GERSTÆCKERIA	199
— <i>spathula</i>	42, 89	DRYOPHTHORIDES	8	— <i>curvilineata</i>	199
— <i>subcarinatus</i>	50	DRYOPHTHORUS	8	— <i>lacti</i>	199
— <i>subcarinatus</i>	46, 50	<i>Dryophthorus</i>	9, 10	— <i>lineatocollis</i>	200
— <i>subopacus</i>	45	— <i>americanus</i>	8	— <i>tolucana</i>	199
— <i>sulcifrons</i>	54	— <i>cocosensis</i>	8	— <i>tolucana</i>	200
— <i>sulcirostris</i>	54, 55	— <i>corticalis</i>	8, 9	<i>Gymnétrides</i>	185
— <i>thoracicus</i>	70	— <i>lymexylon</i>	8	GYMNETRINA	185
— <i>thoracicus</i>	71	— <i>quadricollis</i>	8		
— <i>torridus</i>	73	<i>Dryotribus mimeticus</i>	10	<i>Haloxenus</i>	73
— <i>vittatus</i>	64, 70	DYNAMIS	79, 177	— <i>immigrans</i>	73
— <i>vulneratus</i>	68	— <i>borassi</i>	177		
— <i>xylophilus</i>	49	— <i>germari</i>	80		
— <i>xylophilus</i>	45, 46, 47, 50				

	Page		Page		Page
<i>Hamaba</i>	191	<i>Hoplorrhinoides attaleæ</i>	7	MEGALOCORYNUS	41
— <i>bahamensis</i>	191	— <i>pallidus</i>	7	<i>Megalocorynus</i>	42
<i>Harpacterus</i>	175	<i>Hoplorrhinus</i>	4, 5, 6	— <i>capitatus</i>	41, 42
— <i>ebenus</i>	175	— <i>crispus</i>	5	— <i>conicirostris</i>	42
— <i>quadrisignatus</i>	175	— <i>mexicanus</i>	5	— <i>depressus</i>	41
HEPTARTHRUM	22	<i>Hylastes</i>	73, 78	— <i>depressus</i>	42, 51, 53
— <i>cordilleræ</i>	23	<i>Hylesinus canaliculatus</i>	68	<i>Merothricus</i>	153
— <i>costatipenne</i>	23	HYLOBIINA	178	MESOCORDYLUS	172
— <i>gibbipenne</i>	22			— <i>bracteolatus</i>	174
— <i>gibbipenne</i>	23			— <i>bracteolatus</i>	172, 175
<i>Heterotoxus</i>	101	ILEOMUS	182	— <i>cælomerus</i>	175
— <i>gratus</i>	101	— <i>distinguendus</i>	182	— <i>cylindraccus</i>	175
— <i>transatlanticus</i>	101, 102	— <i>extensus</i>	182	— <i>dispersus</i>	174
<i>Hexarthrum</i>	10, 76	ISCHIOMASTUS	181	— <i>dispersus</i>	172
HILIPINUS	180	<i>Ischiomastus</i>	1, 180	— <i>gracilis</i>	173
— <i>biannulatus</i>	180	— <i>albomarginatus</i>	181	— <i>gracilis</i>	172
HILIPOMIMUS	204	— <i>marginatus</i>	1	— <i>immundus</i>	172
<i>Hilipomorphus</i>	204	— <i>marginatus</i>	181	— <i>leprosus</i>	173
HILIPUS	178	— <i>plinthoides</i>	1	— <i>memnonius</i>	172
— <i>albopictus</i>	178	— <i>torulosus</i>	1	— <i>papulatus</i>	173
— <i>areolatus</i>	180	ISOTRACHELUS	198	— <i>pustulosus</i>	173
— <i>collectus</i>	179	— <i>tibialis</i>	198	— <i>pustulosus</i>	172
— <i>cruciatus</i>	178	<i>Isotrogus</i>	27	— <i>rugicollis</i>	175
— <i>fenestratus</i>	178	<i>Ithaura</i>	10	— <i>sphacelatus</i>	174
— <i>hieroglyphicus</i>	179			— <i>striatus</i>	172
— <i>intensus</i>	180			— <i>subparallelus</i>	171
— <i>limbatus</i>	178	LÆMOSACCINA	194	— <i>subulatus</i>	172
— <i>patens</i>	179	LÆMOSACCUS	194	METAMASIOPSIS	100
— <i>spinipennia</i>	179	— <i>hamatus</i>	194	<i>Metamasiopsis</i>	101
— <i>trifurcatus</i>	179	— <i>sulcifrons</i>	194	— <i>decempunctatus</i>	102
HIMATIUM	23	<i>Lipancylus</i>	28	— <i>decempunctatus</i>	101, 103
— <i>conicum</i>	24	LITOSOMINA	170	— <i>flavopictus</i>	102
— <i>errans</i>	24	<i>Lixomorpha</i>	1, 181	— <i>flavopictus</i>	101, 103
— <i>pubescens</i>	23, 24	— <i>albomarginata</i>	1, 181	— <i>rugipectus</i>	101
— <i>rugicollis</i>	24	LIXUS	181	— <i>rugipectus</i>	102
<i>Homalonotus</i>	195	<i>Lixus</i>	182	METAMASIUS	103, 177
HOMALOSTYLUS	117	— <i>breviculus</i>	181	<i>Metamasius</i>	79, 82, 101
<i>Homalostylus</i>	79, 118	— <i>germari</i>	182	— <i>ambiguus</i>	105
— <i>dentirostris</i>	118			— <i>bigeminatus</i>	103
— <i>dentirostris</i>	117, 134, 177	MACRACALLES	203	— <i>bigeminatus</i>	104
— <i>incertus</i>	118	— <i>parallelus</i>	203	— <i>biguttatus</i>	108
— <i>latiscapus</i>	117	MACRANCYLOIDES	75	— <i>biguttatus</i>	104
— <i>nigrofasciatus</i>	117	<i>Macrancylodes</i>	73	— <i>bisbispignatus</i>	114
— <i>nigrofasciatus</i>	118, 129	— <i>perlongus</i>	75	— <i>callizona</i>	113
— <i>subcylindricus</i>	119	<i>Macrancylus</i>	22, 73, 75	— <i>callizona</i>	102, 105
<i>Homaloxenus</i>	4, 5, 22	— <i>linearis</i>	73, 76	— <i>carbonarius</i>	106
— <i>dentipes</i>	5	MACROMERUS	204	— <i>cinnannatus</i>	110
HOPLOCOPTURUS	209	— <i>numenius</i>	204	— <i>cinnannatus</i>	104
— <i>niveiventris</i>	209	— <i>succinctus</i>	204	— <i>cinnamomeus</i>	103
— <i>nubilus</i>	209	MACRORHOPTUS	190	— <i>cinnamominus</i>	177
— <i>sp.</i>	209	— <i>estriatus</i>	190	— <i>connexus</i>	111
— <i>spinipes</i>	209	— <i>sphæralciæ</i>	190	— <i>connexus</i>	104
— <i>sulphureus</i>	209	<i>Macrorhynchus</i>	22, 73	— <i>dasyurus</i>	111
HOPLORRHINOIDES	6	MÆMACTES	204	— <i>dasyurus</i>	104, 112
<i>Hoplorrhinoides</i>	5	— <i>perforatus</i>	204	— <i>decoratus</i>	105
— <i>attaleæ</i>	6			— <i>dimidiatipennis</i>	106

	Page
<i>Metamasius dimidiatipennis</i>	103, 111
— <i>dispar</i>	114
— <i>ensirostris</i>	103, 114
— <i>fasciatus</i>	109
— <i>fasciatus</i>	104, 114
— <i>hebetatus</i>	116
— <i>hebetatus</i>	105, 113
— <i>hemipterus</i>	103, 105, 106
— <i>maculiventris</i>	115
— <i>maculiventris</i>	105
— <i>melancholicus</i>	103, 107
— <i>nigerrimus</i>	105
— <i>nudiventris</i>	114
— <i>nudiventris</i>	105, 115
— <i>obsoletus</i>	103, 112, 177
— <i>ochreofasciatus</i>	113
— <i>ochreofasciatus</i>	104, 105, 109
— <i>octonatus</i>	116
— <i>octonatus</i>	104, 105, 117
— <i>polygrammus</i>	107
— <i>polygrammus</i>	104
— <i>quadrilineatus</i>	107
— <i>quadrilineatus</i>	103, 115
— <i>rimoratus</i>	103, 112, 115
— <i>sacchari</i>	105
— <i>scutatus</i>	114
— <i>scutatus</i>	105
— <i>scutiger</i>	110
— <i>scutiger</i>	104
— <i>sellatus</i>	108
— <i>sellatus</i>	104, 109
— <i>sericeus</i>	105
— <i>sericeus</i>	103, 106
— <i>signiventris</i>	103, 111, 115
— <i>submaculatus</i>	112
— <i>submaculatus</i>	104, 117, 170
— <i>sulcirostris</i>	110
— <i>sulcirostris</i>	104
<i>Metoposoma</i>	205
METRIOPHILOIDES	205
— <i>barbicornis</i>	205
<i>Metriophilus</i>	205
— <i>definitus</i>	206
MIARUS	185
— <i>erebus</i>	185
<i>Microcleogonus</i>	198
— <i>tibialis</i>	198
MICROMIMUS	28
<i>Micromimus</i>	21, 37
— <i>batesi</i>	28, 29, 30
— <i>continuus</i>	28
— <i>continuus</i>	30
— <i>cribrosus</i>	30
— <i>cribrosus</i>	28
— <i>dehiscens</i>	29
— <i>dehiscens</i>	28

	Page
<i>Micromimus minimus</i>	29
— <i>minimus</i>	28
— <i>nigrescens</i>	29
— <i>nigrescens</i>	28, 30
— <i>pumilio</i>	28, 29
MICROPENTARTHURUM	19
<i>Micropentarthrum</i>	20
— <i>æneum</i>	20
MICROTYPCHIUS	193
— <i>dulcis</i>	193
— <i>errans</i>	193
— <i>grypus</i>	193
— <i>incrimis</i>	193
— <i>mica</i>	193
— <i>setosus</i>	193
— <i>simplex</i>	193
— <i>sulcatulus</i>	193
— <i>variegatus</i>	193
NANUS	5
<i>Nanus</i>	4, 22
— <i>hispidus</i>	6
— <i>punctellus</i>	5
— <i>uniformis</i>	5
— <i>uniformis</i>	6
<i>Nesoticus</i>	5
NYSSONOTUS	20
— <i>seriatus</i>	20
OOCORYNUS	76
— <i>coitosus</i>	76
OOPTERINUS	194
— <i>æneopiceus</i>	194
<i>Opalocetus</i>	209
ORTHOGNATHIDES	171
ORTHOGNATHUS	171
— <i>lividus</i>	171
— <i>subparallelus</i>	171
— <i>subparallelus</i>	172
OTIDOCEPHALINA	194
OXYPTERUS	202
<i>Oxytenopterus</i>	202
PANTOTELES	210
— <i>carinicollis</i>	210
— <i>tenuirostris</i>	211
<i>Paracamptus</i>	1
<i>Parazygops 8-maculata</i>	209
<i>Peltophora</i>	209
PELTOPHORUS	209
— <i>polymitus</i>	209
PENTARTHRIDES	9
<i>Pentarthrinus</i>	14, 20

	Page
PENTARTHURUM	10
<i>Pentarthrum</i>	9, 73
— <i>apicale</i>	212
— <i>cylindricum</i>	10
— <i>fulvicorne</i>	11
— <i>huttoni</i>	10
PHACE	206
— <i>duplex</i>	206
— <i>quadriguttata</i>	206
<i>Phacegaster</i>	24, 25, 27
— <i>nasalis</i>	24
<i>Phlæophagomorphus</i>	14, 15
— <i>angusticollis</i>	17
<i>Phlæophagus</i>	31
— <i>minimus</i>	29
— <i>silbermanni</i>	51
PHRYNOIDES	167
— <i>luteus</i>	168
<i>Phylleruthrus</i>	90
PHYLLERYTHRURUS	90
<i>Phyllerythrurus</i>	82, 96
— <i>annulatus</i>	95
— <i>annulatus</i>	91
— <i>callizona</i>	113
— <i>circumdatus</i>	95
— <i>circumdatus</i>	91
— <i>circumjectus</i>	94
— <i>circumjectus</i>	91, 93
— <i>miniatopunctatus</i>	93
— <i>miniatopunctatus</i>	91
— <i>orizabaensis</i>	97
— <i>ornatus</i>	94
— <i>ornatus</i>	91, 93
— <i>pulcherrimus</i>	88
— <i>quadrinotatus</i>	92
— <i>quadrinotatus</i>	91
— <i>rectistriatus</i>	92
— <i>rectistriatus</i>	91, 95
— <i>sanguinolentus</i>	91
— <i>sanguinolentus</i>	92, 122
— <i>sinuatus</i>	93
— <i>sinuatus</i>	91, 94
— <i>xanthozona</i>	96
— <i>xanthozona</i>	91
<i>Phyllotrox</i>	184
PSEUDACAMPTUS	3
<i>Pseudacamptus</i>	1, 2
— <i>plurisetosus</i>	3
— <i>plurisetosus</i>	2
PSEUDANTHONOMUS	189
— <i>cretaceus</i>	189
— <i>crinitus</i>	189
— <i>hispidus</i>	180
— <i>nanus</i>	189
PSEUDAPOTREPIDES	21
PSEUDAPOTREPUS	21

	Page
<i>Pseudapotrepus macrophthalmus</i>	21
<i>PSEUDEUCOPTUS</i>	27
— <i>macrocephalus</i>	27
<i>PSEUDODERELOMUS</i>	184
— <i>baridiiformis</i>	184
<i>PSEUDOMOPSIS</i>	202
— <i>gibbus</i>	202
— <i>laticollis</i>	202
<i>PSEUDOPENTARTHURUM</i>	14, 211
<i>Pseudopentarthrum</i>	16, 20
— <i>angusticollis</i>	17
— <i>angustulum</i>	15
— <i>angustulum</i>	16
— <i>atrum</i>	18
— <i>brevirostre</i>	16
— <i>caudatum</i>	211
— <i>caudatum</i>	212
— <i>depressifrons</i>	18
— <i>depressifrons</i>	17, 19, 211
— <i>foveifrons</i>	19
— <i>foveifrons</i>	211
— <i>incisum</i>	17
— <i>limbatum</i>	18
— <i>lineifrons</i>	15
— <i>mexicanum</i>	15
— <i>phlæophagoides</i>	17
— <i>phlæophagoides</i>	16, 18, 212
— <i>planifrons</i>	16
— <i>subcylindricum</i>	17
— <i>tenue</i>	19
<i>Rhamphocolus</i>	73
<i>RHINA</i>	176
— <i>affaber</i>	176
— <i>afzelii</i>	176
— <i>barbirostris</i>	176
— <i>costalis</i>	176, 177
— <i>ebriosa</i>	176
— <i>frontalis</i>	175
— <i>nigra</i>	176
— <i>scrutator</i>	176
<i>RHINANISUS</i>	10
<i>Rhinaninus</i>	11, 12
— <i>fulvicornis</i>	11
— <i>hirtipennis</i>	11
— <i>peruanus</i>	11
— <i>pilicauda</i>	13
— <i>pilicauda</i>	11
— <i>planatus</i>	12
— <i>planatus</i>	11, 13
— <i>tenuiculus</i>	13
— <i>tenuiculus</i>	11
— <i>ventralis</i>	12
— <i>ventralis</i>	11, 13
<i>Rhinidæ</i>	171

	Page
<i>Rhizophagus bipustulatus</i>	68, 74
<i>RHODOBÆNUS</i>	119
<i>Rhodobænus</i>	79, 117, 118, 153, 157
— <i>adpersus</i>	136
— <i>adpersus</i>	120, 133, 134, 135, 138, 139, 140
— <i>albopunctatus</i>	138
— <i>albopunctatus</i>	139
— <i>alboscuteatus</i>	137
— <i>andreae</i>	134
— <i>andreae</i>	133
— <i>arcuatus</i>	134
— <i>arcuatus</i>	121
— <i>auctus</i>	149, 151
— <i>auriculatus</i>	127
— <i>auriculatus</i>	118, 120, 128
— <i>bicinctus</i>	145
— <i>bicinctus</i>	147
— <i>bipunctatus</i>	143
— <i>bisignatus</i>	143
— <i>biundulatus</i>	128
— <i>brevirostris</i>	133
— <i>brevirostris</i>	134
— <i>cariniventris</i>	144
— <i>cariniventris</i>	121, 150
— <i>centromaculatus</i>	129, 130, 131
— <i>cinctus</i>	141
— <i>cinctus</i>	120, 145
— —, var. <i>funerarius</i>	141
— —, var. <i>obliquus</i>	141
— <i>cinereiventris</i>	138
— <i>confusus</i>	129
— <i>corniculatus</i>	120, 149, 150
— <i>crassipes</i>	131
— <i>crassipes</i>	132
— <i>cylindricollis</i>	132
— <i>deltoides</i>	146
— <i>deltoides</i>	145, 150
— <i>dentifer</i>	126
— <i>dentifer</i>	120
— <i>12-maculatus</i>	149
— <i>elegans</i>	149, 150
— <i>femoralis</i>	149, 150, 151
— <i>fortirostris</i>	127
— <i>fortirostris</i>	118, 128
— <i>graphicus</i>	150
— <i>guttatus</i>	140
— <i>guttatus</i>	120, 139
— <i>hæmatidus</i>	142, 143
— <i>implicatus</i>	146, 150
— <i>impressus</i>	136
— <i>interpunctatus</i>	150
— <i>interruptus</i>	125
— <i>interruptus</i>	126, 128
— <i>lebasii</i>	149, 151

	Page
<i>Rhodobænus leucographus</i>	141
— <i>leucographus</i>	142
— <i>maculifer</i>	129
— <i>maculifer</i>	117, 120, 130, 131, 145
— <i>maculipes</i>	147
— <i>melanurus</i>	124, 131
— <i>mesomelas</i>	121
— <i>mesomelas</i>	119
— <i>nawradi</i>	123
— <i>nawradi</i>	125, 127
— <i>nebulosus</i>	135
— <i>nigrolineatus</i>	140
— <i>nigrolineatus</i>	133, 138, 139
— <i>nigropictus</i>	146
— <i>nigropictus</i>	121
— <i>nigrosignatus</i>	132
— <i>nigrosignatus</i>	133
— <i>olivaceus</i>	122
— <i>olivaceus</i>	130
— <i>pantherinus</i>	147
— <i>pantherinus</i>	148
— <i>pinguis</i>	129
— <i>pinguis</i>	125, 136
— <i>plicatus</i>	122
— <i>plicatus</i>	126, 128
— <i>pulchellus</i>	148
— <i>pulchellus</i>	121, 150
— —, var. <i>niger</i>	148
— <i>puncticollis</i>	136, 137
— <i>pustulatus</i>	137
— —, var. <i>puncticollis</i>	137
— <i>pustulosus</i>	137
— <i>pustulosus</i>	120, 129, 136, 138, 139, 140, 160
— <i>quadripunctatus</i>	124, 131
— <i>quinquemaculatus</i>	141
— <i>5-punctatus</i>	149, 151
— <i>rubicundus</i>	151
— <i>rubrovittatus</i>	142
— <i>saginata</i>	125
— <i>sanguineus</i>	142
— <i>sanguineus</i>	120, 143
— <i>sanguinicollis</i>	151
— <i>saucius</i>	150
— <i>sexguttatus</i>	130
— <i>stigmaticus</i>	123
— <i>stigmaticus</i>	120, 122, 124, 130
— <i>subcristatus</i>	124
— <i>subcristatus</i>	120, 130
— <i>suturellus</i>	140
— <i>tenuiscapus</i>	128
— <i>tessellatus</i>	125
— <i>thoracicus</i>	151
— <i>13-punctatus</i>	149

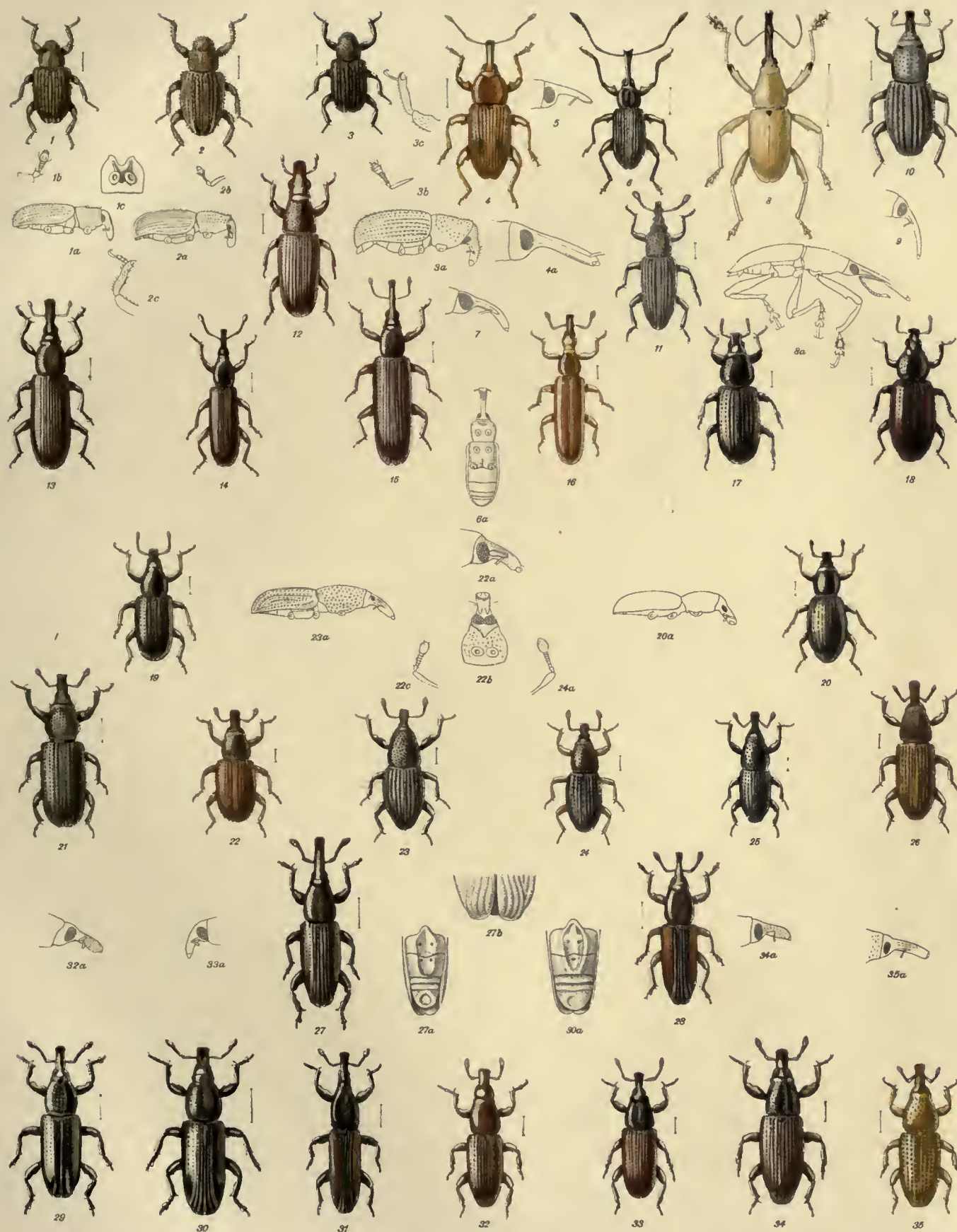
	Page		Page		Page
<i>Rhodobaenus 13-punctatus</i>	120,	<i>Rhyncolus chloropus</i>	73	<i>Sitophilus remotepunctatus</i> .	168, 169
121, 143, 147, 148, 150		— <i>corticalis</i>	31	— <i>setulosus</i>	169
— —, var. <i>auctus</i>	151	— <i>cylindrirostris</i>	39	— <i>stigmaticollis</i>	123
— —, var. <i>corniculatus</i>	150	— <i>elumbis</i>	73	SMICRONYX	183
— —, var. <i>12-maculatus</i> ..	148,	— <i>elumbis</i>	74	<i>Smicronyx</i>	189
149		— <i>fusiformis</i>	73, 74	— <i>fulvus</i>	183
— —, var. <i>elegans</i>	150	— <i>lauri</i>	75	— <i>latisquamis</i>	183
— —, var. <i>femoralis</i>	151	— <i>lauri</i>	73	— <i>silaceus</i>	183
— —, var. <i>graphicus</i>	150	— <i>lignarius</i>	39	— <i>tectus</i>	183
— —, var. <i>immaculatus</i> ..	151	— <i>montivagus</i>	74	<i>Sphaenognathus</i>	171
— —, var. <i>implicatus</i>	150	— <i>montivagus</i>	73	<i>Sphaeracus</i>	5, 6
— —, var. <i>lebasii</i>	151	— <i>oryzæ</i>	75	SPHENOPHORINA	82
— —, var. <i>metropolitanus</i>	148,	— <i>protractus</i>	22, 73	SPHENOPHORUS	152
149		— <i>quercicolus</i>	78	<i>Sphenophorus</i> ..	79, 90, 103, 153, 157
— —, var. <i>nigripennis</i>	151	— <i>tenuirostris</i>	25	— <i>adpersus</i>	136, 140
— —, var. <i>5-punctatus</i>	151	<i>Rhynchophorus asperulus</i>	152	— <i>æqualis</i>	153, 157, 174
— —, var. <i>thoracicus</i>	151	— <i>carbonarius</i>	105	— <i>anceps</i>	149
— —, var. <i>triangularis</i>	151	RHYSSOMATUS	198	— <i>angustus</i>	167
— —, var. <i>vittatipennis</i> ..	150	— <i>nigerrimus</i>	193	— <i>angustus</i>	155
— <i>unidentatus</i>	139	— <i>rufus</i>	199	— <i>aterrimus</i>	156
— <i>valens</i>	136	— <i>semicostatus</i>	199	— <i>aterrimus</i>	153, 157
— <i>varieguttatus</i>	137	— <i>sexcostatus</i>	198	— <i>buridoides</i>	164
— <i>varieguttatus</i> ..	119, 138, 140			— <i>bicolor</i>	165
— <i>venustus</i>	150, 151	SCYPHOPHORUS	152	— <i>bifasciatus</i>	85
— <i>verapacis</i>	133	— <i>acupunctatus</i>	152	— <i>brunneipennis</i>	166
— <i>v-nigrum</i>	131	— <i>anthracinus</i>	152	— <i>callizona</i>	113
— <i>v-nigrum</i>	132	— <i>interstitialis</i>	152	— <i>callosus</i>	163
— <i>ypsilon</i>	144	— <i>robustior</i>	152	— <i>carbonarius</i>	105
— <i>ypsilon</i>	145	— <i>yuccæ</i>	152	— <i>cariosus</i>	158
<i>Rhopalomesites</i>	7	SIBINIA	191	— <i>cariosus</i>	154
<i>Rhyncholus latinasus</i>	40	<i>Sibinia</i>	189, 193	— <i>cicatistriatus</i>	159
<i>Rhynchophorides</i>	79	— <i>albidula</i>	192	— <i>cicatistriatus</i>	154, 161
RHYNCHOPHORINA	79	— <i>americana</i>	192, 193	— <i>cicatipennis</i>	159, 167
RHYNCHOPHORUS	81	— <i>aspera</i>	193	— <i>cinctus</i>	141
<i>Rhynchophorus</i>	79, 82	— <i>dissipata</i>	192	— —, var. <i>rubellus</i>	141
— <i>borassi</i>	81, 177	— <i>melina</i>	192	— <i>cinnamomeus</i>	103, 177
— <i>cicatricosus</i>	158	— <i>pulcherrima</i>	191	— <i>coactorum</i>	160, 161
— <i>cruentatus</i>	81	— <i>pulcherrima</i>	192	— <i>cæsisfrons</i>	161
— <i>depressus</i>	81	— <i>rotundata</i>	191	— <i>cæsisfrons</i>	154, 162
— <i>lanuginosus</i>	81	— <i>rubescens</i>	192, 193	— <i>costatus</i>	101
— <i>linearis</i>	169	— <i>solariella</i>	192	— <i>costipennis</i>	157
— <i>noxius</i>	80	— <i>tessellata</i>	191	— <i>dehuani</i>	100
— <i>palmarum</i>	81	SIPALIDES	172	— <i>deliciosus</i>	145
— <i>palmarum</i>	79, 80, 125	<i>Sipalides</i>	171	— <i>destructor</i>	153, 163
— <i>politus</i>	79	— <i>craia</i>	172	— <i>dimidiatipennis</i>	106
— <i>sanguinolentus</i>	91	SIPALINA	171	— <i>distichlidis</i>	153
— <i>13-punctatus</i>	149	<i>Sipalus</i>	172	— <i>ensirostris</i>	103
— <i>zimmermanni</i>	81	— <i>bracteolatus</i>	174	— <i>fuhræi</i>	83
RHYNCOLIDES	73	— <i>striatus</i>	172	— <i>fasciatus</i>	109
<i>Rhyncolini</i>	73	— <i>subulatus</i>	173	— <i>flexuosus</i>	158
RHYNCOLUS	73	<i>Sitophilus</i>	168	— <i>fuliginosus</i>	84
<i>Rhyncolus</i>	22, 37, 75	— <i>banonii</i>	170	— <i>glabripes</i>	164, 165
— <i>ater</i>	73	— <i>granarius</i>	168	— <i>graminis</i>	164
— <i>brevis</i>	76	— <i>linearis</i>	169	— <i>guttatus</i>	140
— <i>chiriquensis</i>	74	— <i>oryzæ</i>	169	— <i>hebetatus</i>	116
— <i>chiriquensis</i>	73, 75			— <i>hemipterus</i>	103

	Page		Page		Page
<i>Sphenophorus hoegbergi</i>	160	<i>Sphenophorus sanguinolentus</i> ..	91	<i>Stenomimus rufipes</i>	31, 32
— <i>hoegbergi</i>	154, 161	— <i>sculptilis</i>	158, 163	— <i>rugirostris</i>	36
— <i>implicatus</i>	149	— <i>sericeus</i>	105	— <i>rugirostris</i>	31, 32
— <i>impressicollis</i>	164	— <i>sterrakowskyi</i>	82, 87	— <i>verapacis</i>	35
— <i>innus</i>	166	— <i>signaticollis</i>	166	— <i>verapacis</i>	31, 32, 33
— <i>imus</i>	155, 167	— <i>signiventris</i>	103	— <i>wollastoni</i>	33
— <i>incurrens</i>	164	— <i>simplex</i>	163, 164	— <i>wollastoni</i>	31, 34
— <i>incurrens</i>	153, 155	— <i>soltai</i>	161	STENOMMATUS	9
— —, var. <i>monilis</i>	155	— <i>spinolæ</i>	82, 84	— <i>fryi</i>	9
— <i>irrelitus</i>	159	— <i>stigma</i>	141	— <i>sulcifrons</i>	9
— <i>laticaput</i>	117	— <i>stigmaticus</i>	123	<i>Stenoscelis</i>	76
— <i>lebasii</i>	149	— <i>striatipennis</i>	157	STENOTRUPIS	13
— <i>leprosus</i>	116	— <i>striatiformatus</i>	83	<i>Stenotrupis</i>	14
— <i>leucographus</i>	141	— <i>sublævis</i>	163	— <i>acicula</i>	14
— <i>lineatus</i>	166	— <i>submaculatus</i>	112	— <i>crassifrons</i>	13
— <i>lineatus</i>	155	— <i>sulcifrons</i>	162	— <i>exilis</i>	13
— <i>lutulentus</i>	162	— <i>sulcifrons</i>	153, 154, 163	— <i>ovaticeps</i>	14
— <i>lutulentus</i>	154	— <i>terreus</i>	162		
— <i>maculifer</i>	129	— <i>terricola</i>	161	TACHYGONINA	210
— <i>maialis</i>	153	— <i>terricola</i>	154	TACHYGONUS	210
— <i>melancholicus</i>	103	— <i>tibialis</i>	82	— <i>quadrisignatus</i>	210
— <i>melanurus</i>	131	— <i>ulkei</i>	159	— <i>semirufus</i>	210
— <i>memnonius</i>	163	— <i>13-punctatus</i>	149	TELYS	180
— <i>memnonius</i>	155, 164	— <i>validirostris</i>	85	— <i>bisinuatus</i>	180
— <i>monilis</i>	164, 165	— <i>validus</i>	82, 84	TERIRES	183
— <i>multipunctatus</i>	158	— <i>variabilis</i>	149	— <i>pilosus</i>	184
— <i>multipunctatus</i>	154	— —, var. <i>implicatus</i>	149	— <i>plurisetosus</i>	183
— <i>mundus</i>	156	— —, var. <i>lebasii</i>	149	<i>Tetratennus</i>	21
— <i>mundus</i>	153, 157	— <i>venatus</i>	160	<i>Thalattodora insignis</i>	10
— <i>navardi</i>	123	— <i>vestitus</i>	160	<i>Theognete</i>	10
— <i>oblitus</i>	162	— <i>vomerinus</i>	164	THYSANOCNEMIS	190
— <i>obsoletus</i>	103, 177	— <i>vomerinus</i>	155, 163	<i>Thysanocnemis</i>	191
— <i>ochreus</i>	157	— <i>zææ</i>	153	— <i>brevis</i>	191
— <i>ochreus</i>	154	<i>Stenancylus</i>	73, 75	— <i>exclamationis</i>	190
— <i>octocostatus</i>	157	— <i>colomboi</i>	73, 74	— <i>minor</i>	191
— <i>octocostatus</i>	153	STENOMIMUS	30	— <i>pusillus</i>	191
— <i>orizabaensis</i>	97	<i>Stenomimus</i>	22, 31, 37, 39	— <i>suturatis</i>	191
— <i>perforatus</i>	83	— <i>armatus</i>	32	TOMOLIPS	78
— <i>phaeniciensis</i>	160	— <i>armatus</i>	31	<i>Tomolips</i>	9, 22, 73, 77
— <i>piceus</i>	156	— <i>dirutus</i>	33	— <i>asperatus</i>	78
— <i>pictus</i>	157	— <i>dirutus</i>	31	— <i>bicalcaratus</i>	78
— <i>placidus</i>	160	— <i>dubius</i>	32	— <i>quercicola</i>	78
— <i>polygrammus</i>	107	— <i>filirostris</i>	32	TOXORRHINUS	170
— <i>pontederæ</i>	153, 165	— <i>filirostris</i>	31, 33	— <i>banoni</i>	170
— <i>procerus</i>	84	— <i>fryi</i>	30, 31, 34, 35	<i>Trypetides</i>	4
— <i>pulchellus</i>	148, 149	— <i>guatemalensis</i>	34	TRYPETINA	4
— <i>pulcherrimus</i>	82, 88	— <i>guatemalensis</i>	31	<i>Trypetini</i>	4
— <i>pustulosus</i>	119, 137	— <i>ovaticollis</i>	34	TYCHINA	190
— <i>quadrivittatus</i>	165	— <i>ovaticollis</i>	31	<i>Tychius</i>	193
— <i>quadrivittatus</i>	155, 166	— <i>pallidus</i>	31, 34, 35	— <i>errans</i>	193
— <i>reticulaticollis</i>	160	— <i>politus</i>	32	— <i>grypus</i>	193
— <i>reticulaticollis</i> ..	153, 154, 161	— <i>quichensis</i>	36	— <i>setosus</i>	193
— <i>rimoratus</i>	103	— <i>quichensis</i>	31, 32	TYLODERMA	204
— <i>rusticus</i>	153	— <i>rhyncoloides</i>	35	— <i>æneotinctum</i>	204
— <i>sanguineus</i>	142, 146	— <i>rhyncoloides</i>	32, 36	TYRANNION	206
— —, var. <i>lineaticollis</i>	142	— <i>rufipes</i>	36		

INDEX.

221

	Page		Page		Page
Tyrannion diffusus	206	Wollastonia	9, 78	Yuccaborus sharpi	176
— <i>pictilis</i>	206	— <i>quercicola</i>	78	ZYGOPINA	207
— <i>pictipennis</i>	206			ZYGOPS	209
TYTTHOMIMUS	37	YUCCABORUS	175	— <i>amænida</i>	209
— <i>lineatocollis</i>	38	— <i>frontalis</i>	176	— <i>latevittata</i>	209
— <i>rubicundus</i>	37	— <i>lentiginosus</i>	175	— <i>leopardina</i>	209
— <i>rubicundus</i>	38	— <i>lentiginosus</i>	176	— <i>trivittata</i>	209
— <i>rufotestaceus</i>	38				



1,1a-c ACAMPTOPSIS ENCAUSTUS.
 2,2a-c PSEUDACAMPTUS PLURISETOSUS.
 3,3a-c CHOERORRHYNCHUS TENUITARSIS
 4,4a,d,5♀ NANUS UNIFORMIS
 6,6a,d,7♀ " HISPIDUS
 8,8a,d HOPLORRHINOIDES ATTALEÆ
 9♀ " " "
 10 DRYOPHTHORUS QUADRICOLLIS.
 11 STENOMMATUS SULCIFRONS.
 12 PENTARTHURUS CYLINDRICUM
 13♂ RHINANISUS HIRTIPENNIS

14 RHINANISUS VENTRALIS
 15 " PLANATUS.
 16 STENOTRUPIS OVATICEPS.
 17 PSEUDOPENTARTHURUS BREVIROSTRE
 18 " LIMBATUM.
 19 " DEPRESSIFRONS.
 20,20a MICROPENTARTHURUS ÆNEUM
 21 NYSSONOTUS SERIATUS.
 22,22a-c PSEUDAPOTREPU MACROPHthalmus
 23,23a HEPTARTHURUS GIBBIPENNE
 24,24a " COSTATIPENNE

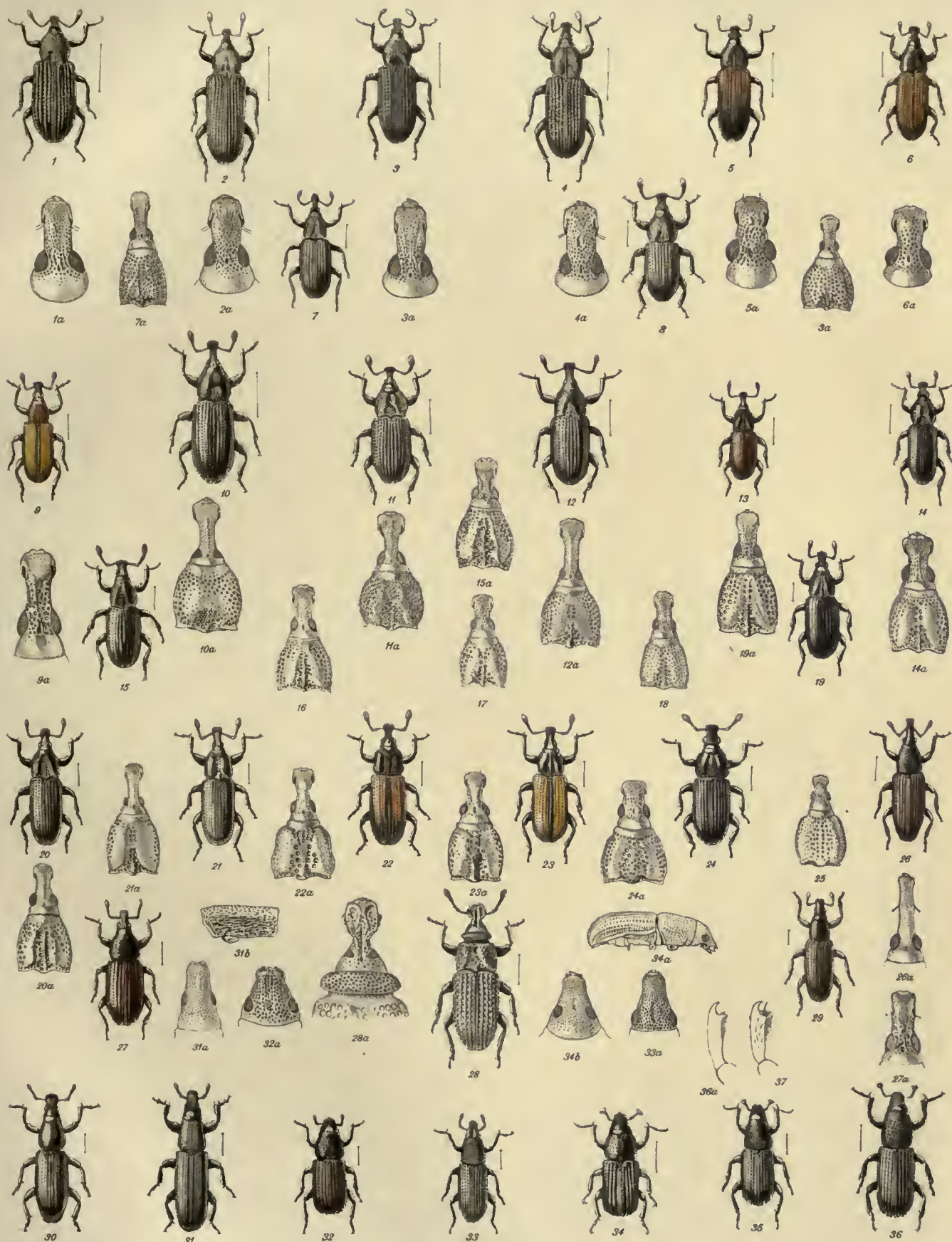
25 HEPTARTHURUS CORDILLERÆ.
 26 HIMATIMUM RUGICOLLE
 27,27a,b,d CATOLETHRUS LONGULUS
 28♀ " FULVOLIMBATUS.
 29♂ " EBENINUS.
 30,30a♂ " FALLAX.
 31 PSEUDEUCOPTUS MACROCEPHALUS
 32,32a MICROMIMUS CONTINUUS
 33,33a " MINIMUS
 34,34a " NIGRESCENS.
 35,35a " GRIBROSUS



1♂ STENOMIMUS FILIROSTRIS.
 2,2a♂ " ARMATUS
 3 " GUATEMALENSIS
 4,4a♂ " RHYNCOLOIDES
 5 " RUGIROSTRIS
 6♂ TYTTHOMIMUS RUBICUNDUS
 7 CARPHONOTUS OCHREIPILIS
 8 CAULOPHILUS LATINUSUS.
 9,9a " COSTATUS
 10 " SERICATUS.
 11,11a♂,12♀ MEGALOCORYNUS DEPRESSUS

13,13a♂ COSSONUS CYLINDRIPENNIS
 14,14a♂ " PUNCTICEPS
 15,15a♂ " RUGOSUS
 16,16a♂ " SUBOPAGUS
 17 " DEPRESSICOLLIS.
 18,18a♀ " LATIROSTRIS
 19♂ " HEPBURNI
 20,20a " CORTICOLA
 21,21a " XYLOPHILUS
 22,22a♀ " SILBERMANNI
 23,23a♂ " CAVIROSTRIS

24,24a♂ COSSONUS BISULCATUS.
 25,25a " PLANUS
 26,26a " SEMIRUFUS
 27,27a♂ " PLANIROSTRIS
 28,28a♂ " CORTICALIS
 29,29a " CONVEXICOLLIS
 30,30a " SCROBICULATOSTRIATUS.
 31,31a " PERFIDIOSUS.
 32,32a " EURYASPIS.
 33,33a " MICRASPIS.
 34,34a " RUFONOTATUS



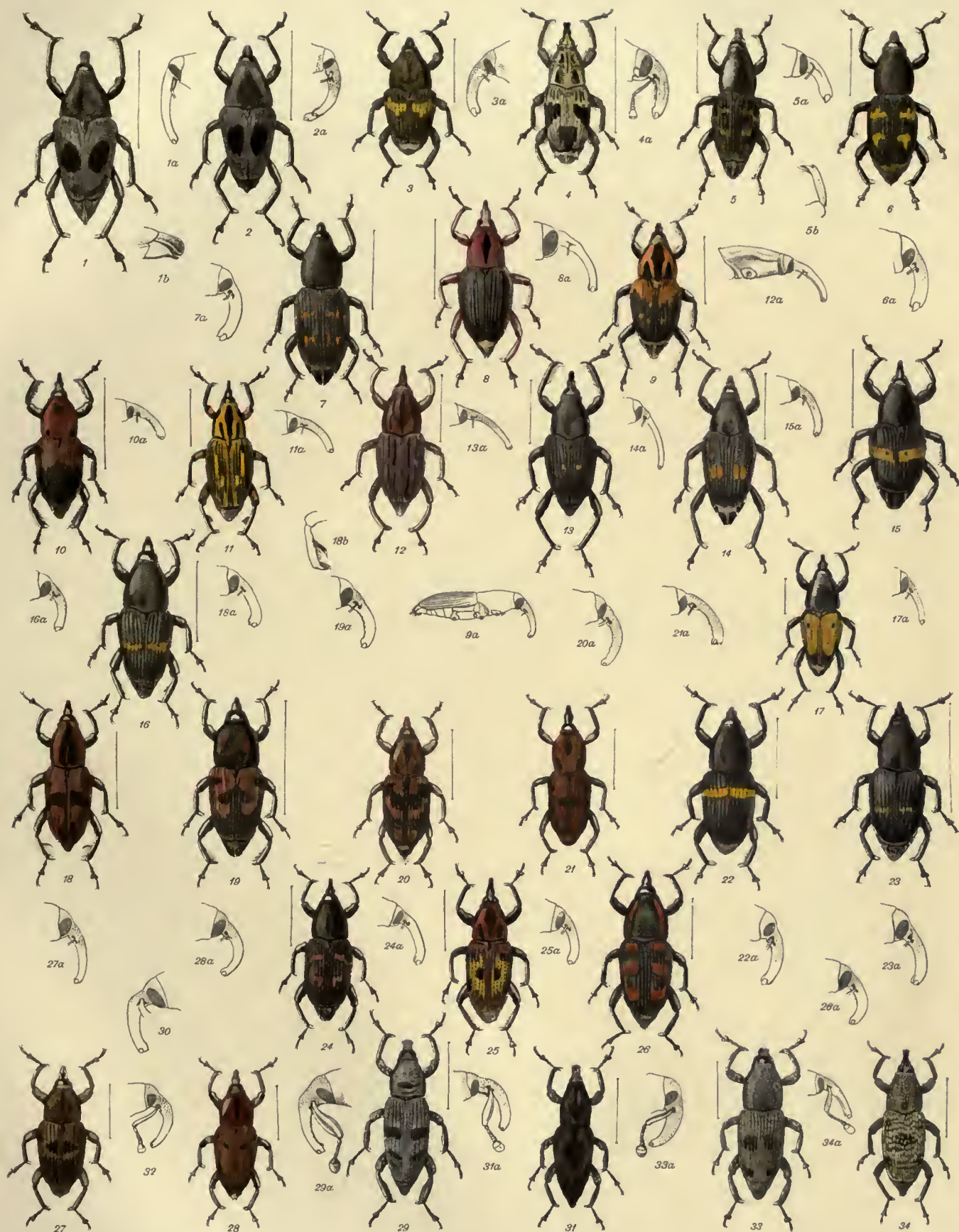
- | | | | | | | | | |
|----------|----------|----------------|----------|----------|----------------------|---------------|--------------------|-----------------|
| 1, 1a | COSSONUS | LATIPENNIS | 13♂ | COSSONUS | FOVEATUS, v. LEBASI. | 25 | COSSONUS | MARGIDUS. |
| 2, 2a | " | SARGI | 14, 14a♂ | " | PUNCTIFRONS. | 26, 26a | " | CATOLETHROIDES. |
| 3, 3a♀ | " | LATUS | 15, 15a♂ | " | IRREGULARIS | 27, 27a | " | CONVEXIROSTRIS. |
| 4, 4a♂ | " | AFFABER. | 16♂ | " | OCULARIS. | 28, 28a | " | SPATHULA. |
| 5, 5a♂ | " | BICOLOR | 17 | " | LIGNIPERDUS. | 29 | RHYNCOLUS | ELUMBIS. |
| 6, 6a♂ | " | CIRCUMFUSUS. | 18♂ | " | DUPLICATUS. | 30♂ | " | CHIRIQUENSIS |
| 7, 7a | " | PARVICOLLIS | 19, 19a | " | CANALICULATUS. | 31, 31a, b | MAGRANCYLOIDES | PERLONGUS |
| 8, 8a♂ | " | ATERRIMUS | 20, 20a | " | EVANESCENS. | 32, 32a | DENDROCTONOMORPHUS | PARALLELUS |
| 9, 9a | " | FLAVOVITTATUS. | 21, 21a | " | NITIDICOLLIS | 33, 33a | OOCORYNUS | CORROSUS |
| 10, 10a♂ | " | SEGNIS | 22, 22a | " | BIGEMINATUS. | 34, 34a, b | CALYCIFORUS | EXCAVATUS |
| 11, 11a | " | BIFOVEATUS | 23, 23a | " | BIVITTATUS | 35 | " | INÆQUALIS |
| 12, 12a♀ | " | FOVEATUS | 24, 24a | " | THORACICUS | 36, 36a♂, 37♀ | TOMOLIPS | BICALCARATUS |



1♂, 2♀ DYNAMIS PEROPACUS.
 3♂, 4♀ RHYNCHOPHORUS PALMARUM.
 5, 5a♂ CACTOPHAGUS FAHRÆI.
 6, 6a♀ " SPINOLÆ.
 7, 7a♂ " "v OBLIQUEFASCIATUS.
 8, 8a♂ " VALIDIROSTRIS.
 9, 9a♂ " CILIATUS.
 10, 10a♂ " RUFOCINCTUS.
 11, 11a♂ " RUFOMACULATUS.
 12, 12a♂ " CIRRATUS.

13, 13a, 14♂ CACTOPHAGUS SIERRAKOWSKYI, vars.
 15♀ " " var.
 16, 16a, 17♂ " PULCHERRIMUS, vars.
 18, 18a♂ CACTOPHAGOIDES VERRUCOSUS.
 19, 19a♂ " GIBBEROSUS.
 20, 20a♂ PHYLLERYTHRURUS SANGUINOLENTUS.
 21, 21a♂ " QUADRINOTATUS.
 22, 22a♂ " RECTISTRIATUS.
 23, 23a♂ " MINIATOPUNCTATUS.
 24, 24a♂ " SINUATUS.

25, 25a♀ PHYLLERYTHRURUS ORNATUS.
 26, 26a♀ " CIRCUMJECTUS.
 27♀ " ANNULATUS.
 28, 28a♂ " " var.
 29, 29a♂ " CIRCUMDATUS.
 30, 30a♂ " XANTHOZONA.
 31, 31a♂ EUCACTOPHAGUS DUPLOCINCTUS.
 32♂, 33♀ " vars.
 34, 34a " ORIZABENSIS.
 35, 35a♀ " GRAPHIPTERUS.



1,1a,b♀ EUCTOPHAGUS CARINIPYGA.
 2,2a♂ " PRUINOSUS.
 3,3a♀ " AUROCINCTUS.
 4,4a♂ ÆTHES SPINICOLLIS.
 5,5a,b♀ METAMASIOPSIS RUGIPECTUS
 6,6a♂ " FLAVOPICTUS
 7,7a♀ " DECEMPUNCTATUS.
 8,8a♀ METAMASIVS SERICEUS, var
 9,9a♂ " "
 10,10a♂ " DIMIDIATIPENNIS.
 11,11a♂ " QUADRILINEATUS

12,12a♂ METAMASIVS POLYGRAMMUS.
 13,13a♂ " BIGUTTATUS
 14,14a♀ " BIGEMINATUS
 15,15a♂ " SELLATUS.
 16,16a♂ " FASCIATUS.
 17,17a♂ " SCUTIGER
 18,18a,b♂ " CININNATUS
 19,19a♂ " CONNEXUS
 20,20a♂ " DASYURUS
 21,21a♂ " SUBMACULATUS.
 22,22a♂ " CALLIZONA

23,23a♀ METAMASIVS OCHREOFASCIATUS
 24,24a♀ " NUDIVENTRIS
 25,25a♂ " SCUTATUS
 26,26a♀ " MACULIVENTRIS
 27,27a♂ " HEBETATUS
 28,28a♀ " OCTONOTATUS.
 29,29a♂ HOMALOSTYLUS NICROFASCIATUS.
 30♀ " "
 31,31a♂,32♀ " DENTIROSTRIS.
 33,33a♂ " INCERTUS
 34,34a♂ " SUBCYLINDRICUS



1, 1a ♀ RHODOBÆUS MESOMELAS
 2, 2a ♀ " PLICATUS.
 3, 3a ♀ " OLIVACEUS
 4, 4a ♂ " NAWRADI, var.
 5, 5a ♂ " STIGMATICUS
 6, 6a ♀ " SUBCRISTATUS
 7, 7a ♀ " TESSELLATUS
 8, 8a ♂ " SAGINATUS
 9, 9a ♀ " INTERRUPTUS
 10, 10a ♀ " DENTIFER
 11, 11a, b, d, 12 ♀ " AURICULATUS.

13, 13a ♂ RHODOBÆUS FORTIROSTRIS
 14, 14a ♀ " BIUNDULATUS.
 15, 15a ♂ " TENUISCAPUS
 16, 16a ♀ " PINGUIS.
 17, 17a ♀ " CONFUSUS.
 18, 18a, b ♂ " MACULIFER
 19, 19a ♀ " SEXGUTTATUS
 20, 20a ♂ " CRASSIPES
 21, 21a ♀ " V-NIGRUM
 22, 22a ♀ " NIGROSIGNATUS.
 23, 23a " " CYLINDRICOLIS

24, 24a ♂ RHODOBÆUS BREVIROSTRIS
 25, 25a ♂ " VERÆPACIS
 26, 26a ♂ " ARCUATUS.
 27, 27a ♀ " ANDRÆÆ
 28, 28a ♀ " NEBULOSUS
 29, 29a ♀ " ADSPERSUS.
 30, 30a ♂, 31 ♀ " VALENS
 32, 32a ♀ " PUSTULOSUS
 33, 33a ♀ " VARIEGUTTATUS
 34, 34a ♂, 35 ♀ " CINEREIVENTRIS
 36, 36a ♂ " ALBOPUNCTATUS.



1, 1a ♀ RHODOBÆUS UNIDENTATUS.
 2, 2a ♂ " NIGROLINEATUS.
 3, 3a ♀ " GUTTATUS.
 4, 4a ♀ " CINCTUS.
 5, 5a ♂ " " var. RUBELLUS.
 6, 6a ♀ " " var. 5-MACULATUS.
 7, 7a ♂ " LEUCOGRAPHUS.
 8, 8a ♀ " RUBROVITTATUS.
 9, 9a ♂ " " var.
 10, 10a ♀, 11 ♂ " SANGUINEUS.
 12, 12a " " BISIGNATUS.

13, 13a ♂ RHODOBÆUS YPSILON.
 14, 14a, b ♂ " CARINIVENTRIS.
 15, 15a ♂ " BICINCTUS.
 16, 16a ♀ " DELTOIDES.
 17, 17a ♂ " NIGROPICTUS.
 18, 18a ♂ " PANTHERINUS.
 19, 19a ♀ " MACULIPES.
 20, 20a ♀ " PULCHELLUS.
 21, 21a ♀ " 13-PUNCTATUS, var.
 22, 22a ♂ " " var. ELEGANS.
 23 " " var. CORNICULATUS.

24 RHODOBÆUS 13-PUNCTATUS, var. GRAPHICUS.
 25 " " var. VITTATIPENNIS.
 26 " " var. TRIANGULARIS.
 27 " " var. FEMORALIS.
 28 " " var. AUCTUS.
 29 " " var. THORACICUS.
 30 " " var. NIGRIPENNIS.
 31, 31a ♂ " RUBICUNDUS.
 32, 32a ♂ SCYPHOPHORUS ACUPUNCTATUS.
 33, 33a ♀ SPHENOPHORUS OCTOCOSTATUS.
 34, 34a ♂ " MULTIPUNCTATUS.



1,1a,b♂ SPHENOPHORUS OCHREUS.
 2,2a♂ " CARIOSUS.
 3,3a,b♂ " CICATISTRIATUS.
 4♀ " RETICULATICOLLIS.
 5,5a♀ " INCURRENS.
 6,6a♀ " QUADRIVITTATUS.
 7♂ " LINEATUS.
 8,8a♂ " ANGUSTUS.
 9,9a♂ PHRYNOIDES LUTEUS.
 10,10a♀ CALANDRA SETULOSA.
 11,11a,b♂ " MEXICANA.

12,12a,b♂ ORTHOGNATHUS SUBPARALLELUS
 13,13a♂ MESOCORDYLUS STRIATUS
 14,14a♂ " GRACILIS
 15,15a♂ " SUBULATUS
 16,16a♂ " PUSTULOSUS
 17,17a♀ " BRACTEOLATUS.
 18,18a♂ " DISPERSUS
 19,19a♂ YUCCABORUS LENTIGINOSUS
 20♂,21♀ RHINA BARBIROSTRIS
 22♂ HILIPUS TRIFURCATUS.

23,23a♀ HILIPUS PATENS.
 24,24a♀ HILIPINUS BIANNULATUS.
 25,25a♂ ILEOMUS EXTENSUS.
 26,26a♀ THYSANOCNEMIS EXCLAMATIONIS
 27,27a,b PSEUDODERELOMUS BARIDIIFORMIS.
 28,28a♂ CHOLUS LONGIPENNIS.
 29,29a♂ " ALBOVITTATUS.
 30,30a♂ " TESSELLATUS.
 31♂ ERETHISTES FASCICULOSUS.
 32♀ " SUBVIOLEACEUS.
 33,33a♀ " OCHRIVENTRIS.



1,1a,d METAMASIIJS CINNAMOMINUS
2 HILIPUS CRUCIATUS, var
3 " COLLECTUS, var
4,4a,d CERATOPUS MACULICOLLIS
5,5a,b SMICRONYX LATISQUAMIS
6,6a TERIRES PLURISETOSUS
7,7a,q ANTHCNOMUS CILIATICOLLIS.
8,8a,d " MELANOSTICTUS
9,9a,q " SOLARIS
10,10a,d PSEUDANTHONOMUS CRINITUS
11,11a,q THYSANOCNEMIS MINOR

12,12a SIBINIA PULCHERRIMA
13,13a " DISSIPATA
14,14a,d LÆMOSACCUS SULCIFRONS
15,15a,d ERETHISTES TRUNCATUS.
16,16a GERSTAECKERIA TOLUCANA
17,17a " CURVILINEATA
18,18a " LINEATOCOLLIS.
19,19a ACALLES TRISERIATUS
20,20a " TRUQUII
21,21a " ANCHONOIDES
22,22a " BINODULUS
23,23a PSEUDOMOPSIS GIBBUS

24,24a,b MACRACALLES PARALLELUS
25,25a,b EUBULUS CRISTULA
26,26a,b METRIOPHILOIDES BARBICORNIS
27,27a PHACE QUADRIGUTTATA
28,28a,d CRATOSOMUS INSOLITUS
29,29a,q " INTERRUPTUS.
30,30a,d " INÆQUALIS
31,31a HOPLOCOPTURUS NIVEIVENTRIS
32,32a TACHYGONUS QUADRISIGNATUS
33,33a,d PANTOTELES CARINICOLLIS
34 PSEUDOPENTARTHNUM CAUDATUM

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